DOCUMENT RESUME

ED 301 695 CE 051 459

TITLE	The H-2A Program. Protections for U.S. Farmworkers. Report to Congressional Requesters.
INSTITUTION	General Accounting Office, Washington, DC. Program Evaluation and Methodology Div.
REPORT NO	GAO/PEMD-89-3
PUB DATE	Oct 88
NOTE	122p.
AVAILABLE FROM	U.S. General Accounting Office, P.O. Box 6015, Gaithersburg, MD 20877 (First five copies--free; additional copies--$2.00 each; 100 or more--25% discount).
PUB TYPE	Reports - Evaluative/Feasibility (142)
EDRS PRICE	MF01/PC05 Plus Postage.
DESCRIPTORS	Agricultural Laborers; *Employment Practices; Estimation (Mathematics); *Farm Labor; Federal Legislation; *Foreign Workers; *Labor Legislation; Research Methodology; *Salary Wage Differentials; *Undocumented Immigrants; Work Environment
IDENTIFIERS	*Immigration Reform and Control Act 1986

ABSTRACT

The demand for legal foreign workers for temporary or seasonal agricultural work now permitted under what is known as the H-2A program will likely increase as the employer sanctions in the Immigration Reform and Control Act of 1986 limit the use of undocumented foreign workers. To protect U.S. farmworkers, the law requires that they be given first opportunity for jobs and that their wages and working conditions are not adversely affected by the use of H-2A workers. The Department of Labor (DOL) relies on two types of surveys to set minimum wages for U.S. farmworkers--a Department of Agriculture (USDA) nationwide survey on farm labor wages and selected DOL-sponsored, state-conducted area surveys of prevailing wages. A General Accounting Office evaluation of the USDA survey indicated that, although the survey is generally sound, it has a potentially serious flaw as used by DOL to set hourly wage minimums. The precision of its wage estimates is unknown and potentially unreliable, and some of the prevailing wage surveys include practices that create potentially erroneous wage estimates. The DOL's practices were also found to provide weak nonwage protections for U.S. farmworkers. Measures for correcting the flaws identified were formulated. (Appendixes include technical data on the USDA survey and comments from the USDA and DOL.) (MN)

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ED 301 695

United States General Accounting Office

GAO

Report to Congressional Requesters

October 1988

THE H-2A PROGRAM

Protections for U.S. Farmworkers

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United States
General Accounting Office
Washington, D.C. 20548

Program Evaluation and
Methodology Division

B-222748

October 21, 1988

The Honorable Augustus F. Hawkins, Chairman
The Honorable James M. Jeffords, Ranking
Minority Member
Committee on Education and Labor
House of Representatives

The Honorable William D. Ford
Chairman, Task Force on Immigration
Committee on Education and Labor
House of Representatives

In response to your June 27, 1986, letter, we are submitting this report on the wage and non-wage protections afforded U.S. farmworkers by the Department of Labor's (DOL's) regulations under the H-2A program that allows for the admission of foreign agricultural workers. We have reviewed the quality of the surveys used to set minimum wages and DOL's procedures for certifying a shortage of U.S. workers. We recommend technical improvements to the surveys and procedural changes in the protections for U.S. farmworkers.

We are sending copies to interested congressional committees, the Secretary of Labor, and the Secretary of Agriculture, and we will make copies available to others upon request.

Eleanor Chelimsky
Director

Executive Summary

Purpose

The employer sanctions in the Immigration Reform and Control Act of 1986 may effectively limit the use of undocumented foreign workers. If they do, demand may grow for legal foreign workers for temporary or seasonal agricultural work now permitted under the act and known as the H-2A program. To protect U.S. farmworkers, the law requires that they have first opportunity for jobs and that their wages and working conditions are not adversely affected by the use of H-2A workers. Critics charge that regulations are not adequate to this task and that, if the program expands, the effectiveness of these protections will be of increasing concern.

At the request of the House Committee on Education and Labor, GAO answered three questions: (1) How good are the Department of Labor's (DOL's) current methods for setting minimum hourly wages applicable under the H-2A program, and are improvements feasible? (2) How good are DOL's methods for determining prevailing wages for specific crop activities, and are improvements feasible? (3) Do recruitment rules (and other nonwage protections) ensure that H-2A workers are used only in labor shortage situations?

Background

The H-2A program—first enacted as the H-2 program in 1952—provides for nonimmigrant aliens to do temporary or seasonal agricultural work. An employer who foresees a shortage of U.S. workers may request nonimmigrant alien workers. The U.S. attorney general decides whether to approve such a request but cannot approve it unless the employer has applied to DOL for a certification of specific conditions. Foremost among them are that a labor shortage exists and that the wages and working conditions of U.S. workers similarly employed will not be adversely affected.

To protect U.S. farmworkers, DOL requires employers to attempt to recruit them first and to meet minimum standards for benefits, wages, and working conditions for both U.S. and H-2A workers. DOL relies on two types of survey to set minimum wages: a U.S. Department of Agriculture (USDA) nationwide survey of farm labor wages and selected area surveys of prevailing wages sponsored by DOL and conducted by state employment agencies. The main use of the USDA survey is to set a minimum flat hourly wage rate, and of the prevailing wage surveys, to set minimum piece rates.

GAO answered the three evaluation questions by gathering information from DOL and USDA officials, examining 15 prevailing wage surveys

undertaken in 1987 (using telephone interviews and site visits), and making an in-depth case study of nonwage protections in a tobacco crop area. To assess the technical quality of the two types of survey, GAO examined survey procedures for conformity with sound survey practices.

Results in Brief

The USDA survey is generally sound but also has a potentially serious flaw as used by DOL for setting hourly wage minimums: the precision of these estimates is unknown and thus potentially unreliable. (See pages 29-35.) This situation could be corrected by routinely producing sampling error estimates. As to the technical adequacy of the prevailing wage surveys for specific crop activities, some surveys included questionable practices that create potentially erroneous wage estimates. (See pages 36-56.) Some of these practices are readily correctable. In addition, GAO found that DOL could strengthen its modest oversight of the state agencies conducting the surveys. DOL's procedures give uncertain protection to the U.S. workers who respond to recruitment. However, in the tobacco growing area GAO examined, DOL's certification of a labor shortage appears to have been accurate. GAO's extensive effort to validate the shortage revealed very limited interest in tobacco work by nearby U.S. workers.

GAO's Analysis

Wage Protections: Minimum Hourly Rates

USDA has never measured the precision of the annual hourly wage rate estimates used by DOL to set statewide minimum wages. This is of special concern because available evidence on quarterly estimates suggests that there are unacceptably large error margins for at least three regions of the country. GAO observed that the survey measures a general farm wage that appears to be lower than the average wage for U.S. workers employed in the same crop activities as H-2A workers.

Wage Protections: Prevailing Wage Rates

The technical quality of 15 prevailing wage surveys conducted during our 1987 study period varied notably, and some of these surveys were poor. Concerns included inconsistent counting of undocumented workers, mail surveys with response rates as low as 12 percent, employer lists that were not systematically compiled, analytical miscalculations, and the lack of adequate indicators of survey quality. Other concerns

related to the quality of the interview schedule, clarity of guidance, and the adequacy of DOL's monitoring. Further, the prevailing wage was determined only with regard to the most common unit of payment. Thus, differing units of payment could result in a sizable portion of the workers in a sample not being weighted in the calculation of the prevailing wage, even if units of payment (such as per bushel box and per 1 1/8 bushel box) could be converted to a common base.

Even if both types of survey provided reliable wage estimates, issues about the relevance of the data to wage protections would remain. DOL has itself raised the concern that the presence of foreign workers would depress prevailing wages in agriculture. If so, wage minimums based solely on prevailing wages would not grant relevant protections because they would reflect a depressed wage. The legislation states that the H-2A program shall not have an "adverse effect" on the wages of U.S. workers who are "similarly employed" to the foreign agricultural workers. To offset wage depression, DOL sets an adverse effect wage rate as a minimum wage. The agency has broad discretion in choosing methods of setting this rate but has generally indexed it to a large-scale wage survey. Each time a new survey or method is used, there may be a change in the level or growth of these rates. (Another method of setting them would be to measure wage depression precisely and use that measure to adjust some average agricultural wage rate, but GAO judges this approach infeasible because of technical and administrative constraints.) Further, the legislative mandate appears to be sufficiently broad that DOL could interpret "adverse effect" in several ways. Thus, the term "adverse effect" and the protections it offers are not clearly specified and may be subject to change.

Nonwage Protections: Recruitment Efforts

GAO's study of workers in Virginia tobacco showed that DOL's practices provide weak protections for U.S. workers. Since DOL had only growers' accounts of the recruitment outcomes, it does not know whether its referrals received fair consideration. Making this determination is the responsibility of DOL under the H-2A program.

Tobacco growers seem to prefer foreign workers, partly because of growers' ability to more selectively recruit productive and reliable workers among the many available foreign workers. Few U.S. workers were referred at the wages and working conditions offered, perhaps from discouragement by growers but also from the availability of more attractive job opportunities. Government welfare and unemployment benefits were apparently not a critical factor; the potentially employable persons

among those locally collecting benefits constituted only a small part of the labor force needed. (See pages 81-82.)

Recommendations

To ensure that the minimum wages and recruitment procedures set by DOL regulations afford appropriate protections to U.S. workers, GAO recommends that the Secretary of Labor

- negotiate with USDA to provide routine analysis of error margins surrounding the wage estimates on which statewide minimum hourly wage rates are based and to improve the survey as necessary to maintain reasonably small margins of error around such estimates;
- provide greater oversight of and guidance to the state agencies conducting the prevailing wage surveys, including revising the survey handbook and forms to improve consistency of procedures and ability to monitor quality of implementation;
- consider converting units of payment to a common base to ensure that prevailing wage findings are calculated from the largest possible number of workers surveyed; and
- improve worker protections under current law by incorporating referred workers' accounts of reasons for not being hired or being fired. (State employment officials, for instance, might contact these referred workers to get their accounts. These persons might be difficult to contact, but this activity might help to ensure that referred workers are rejected or terminated only for lawful, job-related reasons.)

Agency Comments

DOL and USDA agreed to act on some of the GAO recommendations and to study others. USDA agreed to provide the sampling information GAO recommends, and DOL agreed to discuss sampling and other technical issues with USDA. GAO and DOL disagreed over the extent to which USDA's estimates represent the wages of U.S. workers employed in the same occupations as H-2A workers. DOL plans to set up a work group to consider all the suggestions GAO made to improve the prevailing wage surveys. DOL viewed GAO's recommendation to gather referred workers' accounts of recruitment outcomes as potentially useful in selectively monitoring "problem" employers. However, this selective approach fails to address the issue of detecting "problem" employers suggested by the GAO case study. DOL's and USDA's comments, followed by GAO's responses, are contained in appendixes III and IV.

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Abbreviations

AEWR	Adverse effect wage rate
ALS	Agricultural Labor Survey
CV	Coefficient of variation
DOL	U.S. Department of Labor
ETA	Employment and Training Administration
GAO	U.S. General Accounting Office
H-2A	Amended section of Immigration and Nationality Act of 1952 providing for the admission of nonimmigrant aliens to do temporary or seasonal agricultural labor
INA	Immigration and Nationality Act of 1952
INS	Immigration and Naturalization Service
IRCA	Immigration Reform and Control Act of 1986
SAW	Special Agricultural Workers
SSO	State Statistical Offices
USDA	U.S. Department of Agriculture

Introduction

The farm sector has historically been given special consideration in immigration policy, with several programs allowing growers to supplement domestic labor with foreign temporary labor. Foreign workers have been used in labor intensive field crops for almost 100 years, but the first large-scale alien labor program began in 1917 as the result of wartime labor shortages. U.S. agriculture, especially in the southwest, grew up in part because of the availability of foreign workers.

Views on the impact of authorized foreign workers on U.S. workers tend to be polarized. One view is that authorized foreign workers preserve complementary jobs for U.S. workers in agriculture by taking jobs that are essential but that U.S. workers view as unattractive and thus are abandoning. The proponents of this view believe that a program of authorizing foreign workers is superior to a system of undocumented workers because the former minimizes any possible adverse effects on U.S. workers by insuring that all workers are protected by the same laws and standards. An opposing view holds that authorized foreign workers displace U.S. workers, especially those from already disadvantaged groups, and perpetuate wages and working conditions that are unattractive to U.S. workers.

If the employer-sanction provisions of the new immigration law are effective, unauthorized workers will no longer be a viable option for farm employers. The question of how best to provide legal foreign labor to agriculture may then become of paramount importance. The contribution that a regulated temporary guestworker program can make toward satisfying total labor demand depends partly on how the quality controls for both wage and nonwage minimum standards required by the legislation are implemented. Our evaluation of existing protections for U.S. workers under the H-2A program should help to inform this debate.

In this chapter, we outline the persisting issues surrounding the use of foreign labor in U.S. agriculture and describe the program of admission for temporary alien workers, including the various kinds of protection it affords U.S. workers. We then describe our study's objectives, scope, and methodology. The chapter concludes with an overview of the rest of the report.

Origin and Development of the H-2A Program of Legal-Alien Farmworkers

During the period 1942-1964, temporary Mexican workers called "braceros" were employed on U.S. farms under a series of legislative authorizations. At the peak of the bracero period, in the late 1950s, over 400,000 braceros per year were admitted for temporary employment, and the U.S. government played an active role in recruiting the workers, getting them to growers, and maintaining official arrangements with the Mexican government. However, a 1959 consultants' report to the Secretary of Labor (U.S. Department of Labor, October 1959) highlighted shortcomings in the protection of domestic farmworkers. The report cited DOL's own studies showing that domestic workers' wages tended to stagnate or decline in areas using braceros while farm wage rates were growing nationally, and that the wages paid by employers of braceros tended to be lower than those paid by other agricultural employers in the same area.

Although the bracero program was still in effect, the Immigration and Nationality Act of 1952 (P.L. 82-144) authorized another program of temporary foreign workers called "H-2" after section 101(a)(15)(H)(ii) of the law. The program—later renamed the H-2A program[1] —has provided legal-alien agricultural workers, mainly to east coast growers in the sugar and apple industries. (Presumably, in the western United States large numbers of illegal workers provided a ready labor supply so that western agriculture in the recent past has not felt much need to use the formal procedures and meet the legal requirements of the H-2A program.) Approximately 20,000 workers in recent years have been authorized for admission to fill agricultural and logging jobs at the request of about 2,000 employers. The program places no cap on the number of workers who may be certified. Tables 1.1 and 1.2 show the numbers of requested H-2A agricultural and logging jobs certified as meeting legal requirements by the Department of Labor (DOL) for 1986.

[1]For the sake of consistency, we will use "H-2A" instead of "H-2" throughout the report.

Table 1.1: Number of H-2A Agricultural Jobs Certified, by Crop or Activity, 1986

Crop or activity	Number certified[a]
Sugarcane	10,052
Apples	6,367
Irrigation	1,130
Sheepherding	1,072
Logging	1,059
Citrus	610
Tobacco	594
Other	293
Total	**21,177**

[a]The number of jobs certified by DOL (which may differ from the number of foreign workers actually hired).

Source: DOL, U.S. Employment Service, Division of Foreign Labor Certification, 1986 Annual Report

Table 1.2: Number of H-2A Agricultural Jobs Certified, by State and Crop or Activity, 1986

State	Number of jobs certified[a]	Crop or activity
Florida	10,052	Sugarcane
New York	2,748	Apples
Maine	1,511	Apples, logging
Virginia	1,485	Apples, tobacco
Idaho	1,235	Irrigation, other
Arizona	728	Citrus, other
West Virginia	719	Apples
Massachusetts	537	Apples
Other (18 states)	2,162	Various[b]
Total	**21,177**	

[a]The number of jobs certified by DOL may differ from the number of foreign workers actually hired.

[b]The various other crops or activities include custom combine work, cabbage picking, sheep shearing, tree pruning, and cranberry harvesting.

Source: DOL, U.S. Employment Service, Division of Foreign Labor Certification, 1986 Annual Report

How the Program Works

The purpose of the H-2A program is to assure agricultural employers an adequate labor force while at the same time protecting the jobs of U.S. workers. Agricultural employers who feel they need foreign workers apply to DOL for certification or approval of their requests to import aliens, specifying particular jobs and a specific date of need. (The Immigration and Naturalization Service (INS) issues the visas to the foreign workers but requests prior advisory certification by DOL that requirements of the law have been met.) The law states that DOL must review the request to certify that the following conditions are met:

- There are not sufficient qualified U.S. workers available to do the work.
- The foreign workers' presence will not adversely affect the wages and working conditions of U.S. workers similarly employed.

To satisfy DOL on these two criteria, growers must follow prescribed recruitment procedures using state employment service offices and must offer prescribed wage levels, working conditions, and nonwage benefits—all designed to protect the jobs, wages, and working conditions of U.S. workers. It is the effectiveness of these protections that is at issue.

To ensure that domestic workers' wage levels are not adversely affected by a pool of cheaper foreign labor, employers requesting H-2A workers must agree to pay their H-2A and domestic workers at least the highest rate of pay from among the adverse effect wage rate (AEWR), the prevailing wage for the crop activity in the locale, and the federal or state statutory minimum wage.[2] (These employers must pay the same wage or rate of pay to both their domestic and their H-2A workers.) DOL annually prescribes for each state an AEWR, which is an hourly minimum based on a survey of farm wages. It is defined as that wage which does not adversely affect U.S. workers similarly employed. DOL also requires H-2A growers to pay the prevailing wage rate, which can be either an hourly or piece rate (depending on local practices), if it is a higher hourly rate than the AEWR.

If the prevailing wage rates are piece rates—that is, wages set by production units, such as boxes, bins, or bushels picked—and growers elect to pay by a piece rate method, they must pay at least the prevailing piece rate and, in practice, no less than the hourly rate of AEWR. Piece rates result in either higher or lower earnings per hour than a flat hourly wage rate, depending on the productivity of the worker. Under DOL rules, a worker earning less than AEWR under a system of piece rates is entitled to supplemental pay to reach the AEWR hourly rate.

On the other hand, the employers who pay by the piece rate may require a minimum productivity standard as a condition of job retention. The employer thus has a means of firing less productive workers whose earnings might fall below AEWR. However, DOL limits this right. Unless DOL makes an exception, it requires the productivity standard to be no more than that set by the employer in 1977 or, if the employer first

[2]"Domestic workers" refers here to U.S. workers in contrast to foreign workers. It does not refer to household workers, although this is another common usage of the term. We will refer to both legal immigrants and native-born U.S. citizens as domestic or U.S. workers. Under our usage, H-2A workers are foreign workers because they are admitted as nonimmigrants.

applied for H-2A certification after 1977, no more than the standard set by other similar employers in the area at the time of the employer's first application.

DOL's wage minimums under the H-2A program are based on two types of survey. Under DOL's June 1987 regulations, AEWRs are set to equal the previous year's annual regional average hourly wage rates for field and livestock workers (combined) as computed from the first type: the U.S. Department of Agriculture's (USDA's) nationwide and quarterly wage surveys. For example, the AEWR in effect for the 1988 season for the states in the Pacific region—that is, Oregon and Washington—is that region's average hourly agricultural wage for 1987 as computed by USDA. Prevailing wage minimums, on the other hand, are based on a second type of survey sponsored by DOL and conducted by state employment service officials in a specific area and for a specific crop or activity when employment of foreign workers in that crop or activity is anticipated. For example, the prevailing wage minimum for apple workers in the Winchester, Virginia, area in the 1988 season will be determined by the prevailing wage survey of apple workers in that area during the 1987 season. Depending on the prevailing local practices, prevailing wage rates are in the form of hourly rates or piece rates.

In addition to wages, farm employers' recruitment, hiring, and screening procedures affect whether U.S. workers are hired and stay in the jobs offered. Before gaining access to foreign temporary workers, growers must test the market under certain specified minimum wages, working conditions, and recruitment procedures to prove that they have a domestic labor shortage. Further, employers are restricted by the legislation from discriminating against U.S. workers at the job sites to open up jobs for H-2A workers for whom the employers have requested certifications. The law has other requirements of minimum benefits growers must meet after workers are hired, including paying travel expenses (when it is the prevailing practice in the area or they are offered to H-2A workers) and providing housing (for workers living farther away than commuting distances). All these legal requirements are designed to provide equivalent benefits and working conditions for domestic and H-2A workers and to prevent growers from creating work conditions so adverse that U.S. workers would never accept them, while foreigners imported from economically depressed areas and with virtually no bargaining power would. Growers are even required to offer jobs to qualified domestic workers after filling their labor needs with H-2A workers, up to the midpoint of the term for which they requested the H-2A workers.

Procedures for reviewing growers' requests for alien workers have been streamlined but not significantly changed by the Immigration Reform and Control Act of 1986 (IRCA). IRCA included a major legalization provision for previously illegal farmworkers, the Special Agricultural Workers (SAWs) program, which continues the special access of farm employers to foreign workers if the employees can prove their previous employment in agriculture. The SAW program workers, however, are eligible to become permanent residents, unlike the temporary, nonimmigrant H-2A workers, and thus can move into other jobs in time.

How many workers become permanent residents through this program, and the impact of the SAWs' eventual job mobility on the demand for labor under the H-2A program, will only become clear over the next few years. H-2A workers may also replace some of those agricultural workers who are currently unauthorized. In view of the prospect of legal sanctions being imposed against those hiring illegal alien farmworkers, the Congressional Budget Office has estimated that the H-2A program could expand over ten-fold to 250,000 H-2A workers.

Additional Context

Congressional intent and labor patterns form the context of our work. We note, for example, that the intent of the Congress in including a regulated agricultural guestworker program in the revised immigration legislation has been to strike a balance: on one hand, to respond to concerns of U.S. agriculture by increasing the supply of foreign workers when verifiable labor shortages occur, and on the other hand, to respond to concerns of U.S. labor by permitting entry of foreign workers only after specific procedures intended to protect the jobs and wages of U.S. workers are followed. The apparent intent of the changes mandated by IRCA was to make the program simultaneously more protective of American labor and more responsive to the legitimate needs of growers.

Larger claims about the viability and economic importance of U.S. agriculture are often raised in the debate over agricultural guestworker programs. Farmworker groups have argued that a sufficient supply of U.S. workers would be available if growers would only raise wages. Conversely, growers and their representatives commonly make a chain of linked arguments in discussing their labor needs: that a supply of productive U.S. labor is not available (or available only at a ruinous cost), hence production is viable only with the use of foreign labor, and that the alternative of allowing demand for agricultural products to be met by imports would lead to the loss of many related ("complementary")

jobs held by U.S. workers in the areas of food processing and distribution. (As noted in a recent report, Agricultural Trade: Trends in Imports of Fruits, Vegetables, and Other Agricultural Products (GAO/RCED-87-177FS, Sept. 29, 1987), opinions differ about whether the decline in the U.S. agricultural trade balance between 1981 and 1986 signals the loss of this country's ability to compete internationally or simply a return to the lower, more stable trade balances of the period prior to the 1970s. Evidence does indicate increases in some competitive agricultural imports, such as fruits and vegetables, during the period of 1975-86.)

This report will examine both the wage and nonwage methods of protecting U.S. workers: the wage protection afforded by the system of state-wide minimum hourly wages (the AEWRs) as well as by further requirements concerning prevailing wage rates, and the protections afforded by the recruitment and working conditions requirements.

Objectives, Scope, and Methodology

In order to illuminate some of the issues outlined above, we were requested by the House Committee on Education and Labor to address the following questions:

1. How good are the Department of Labor's (DOL's) current methods for setting minimum hourly wages applicable under the H-2A program, and are improvements feasible?

2. How good are DOL's methods for determining prevailing wages for specific crop activities, and are improvements feasible?

3. Do recruitment rules (and other nonwage protections) ensure that H-24 workers are used only in labor shortage situations?

The Scope of the Work We Performed

Our evaluation focuses on the statutory and regulatory requirements that were in effect during the period of our data collection, which primarily took place during the last half of 1987. Under the June 1987 H-2A program regulations, DOL revised its methodology for setting AEWRs. Although other methods have been used to set these AEWRs, we concentrated on assessing the latest approach and did not evaluate the others. The June 1987 regulations also implemented additional recruitment requirements for any new applications for certification. Since the applications for certification in our case study area were filed before the new regulations were effective, we could not assess the effects of the additional recruitment rules.

Since our task was to assess the methods used to discover AEWRs and the prevailing wages, we will not devote much discussion to the impact of state and federal statutory minimum wages on wage protections under the H-2A program. The higher of these statutory minimum wages would become the effective minimum wage set by DOL if it was higher than both the applicable AEWR and the prevailing wage. During the period of our review, however, state and federal minimum wages were lower than the applicable AEWRs, and therefore were not the effective minimum wage for H-2A workers in any state.

Although we make relevant observations, an assessment of the economic viability of U.S. agriculture in the absence of a supply of foreign labor exceeds the scope of our work. First, a wide range of data would be needed on the efficiency of current production methods, on the ability of capital to replace labor in various crops, and on the profit margins of agricultural production under different labor mixes. Also, the legislation does not directly address the issue of possible secondary economic effects that may result from labor shortages. Further, the legislation only protects workers "similarly employed," and thus not those workers employed in ancillary activities.

For our evaluation of the USDA survey, we interviewed USDA officials and examined available information, but we did not observe field procedures. In our analysis of the survey over time, we looked only at the years during which the USDA survey produced comparable estimates, that is, the years 1980 and 1985-87. For the prevailing wage surveys, we observed field procedures through three site visits and gathered data about all the prevailing wage surveys completed during the period of our review. (If the summary report was not available by the end of our review period, we reviewed the summary report of the prior season, if it was available to us.) With respect to the question of the effectiveness of recruitment and other nonwage protections, we closely examined recruitment practices in one season in one crop area, and the labor supply options that growers faced. Labor needs and labor supply vary greatly from year to year and in different parts of the country, so our results cannot be generalized (although they do suggest general issues and problems).

Our Evaluation Methodology: Wage Setting

We used two basic approaches for addressing the study questions. We assessed the technical quality of the two types of survey that DOL used in minimum-wage setting (for question 1 about AEWRs and question 2

about prevailing wages). We also examined the effectiveness of recruitment requirements and other nonwage protections (question 3) in one selected crop area by doing a comprehensive case study. A more detailed description of each approach follows.

With regard to questions 1 and 2, our methodological review assessed the accuracy and relevance of wage data gathered by two different types of survey. These are the quarterly Department of Agriculture surveys of farm establishments, which gather nation-wide data on the hired agricultural work force, and the surveys performed by state employment offices under guidance from DOL, which estimate local prevailing wages in specific crops. This assessment involved our review and evaluation of the data and methods used in the following steps:

- documentation of survey procedures,
- technical assessment of the surveys, and
- observations about the relevance of the survey data for wage protections.

Documentation of Survey Procedures

The first step of our survey evaluation was accomplished through a review of the written documentation for both surveys and interviews with officials at USDA and DOL. To gather further information on the prevailing wage surveys, we observed in the field as state officials completed three surveys which we had judgmentally selected to provide a range of examples. One survey was conducted in a western state anticipating future foreign workers, the second in a mountain state in transition from illegal to H-2A legal foreign workers, and the third in an eastern state with a longstanding H-2A work force. As shown in table 1.3, we also used a structured telephone interview approach to collect data on two of these surveys as well as on 12 other crop surveys completed during the period of our work. (Full data were not available from one of our site visits during the period of our data collection.)

Table 1.3: Site Visits and Structured Interviews for Prevailing Wage Surveys

State	Crop or activity	Site visit	Structured interview
Connecticut	Tobacco		x
	Apples		x
Idaho	Irrigation	x	x
Maine	Apples		x
Montana	Irrigation		x
Nevada	Irrigation		x
New Hampshire	Apples		x
Oregon	Pears		x
	Strawberries	x	x
	Raspberries		x
	Apples		x
Virginia	Cabbage		x
	Apples	x	
Washington	Apples		x
West Virginia	Apples		x

Technical Assessment of the Surveys

We assessed the surveys with an adapted model of the error profile as developed by the Office of Federal Statistical Policy and Standards. (See Brooks and Bailar, 1978.) The objective of the model is to list all potential sources of error in each survey operation. Ideally, the impact of each and the combined impact of all sources of error would be presented, but this ideal is rarely reached because of the experimentation required to measure impacts and the interactions between various sources of error. Further, our application of the error profile was markedly limited by the available data. To construct our error profile, we used as criteria of adequacy the generally accepted conventions of good survey practice. (See, for example, Hoaglin, et al., 1982; Warwick and Lininger, 1975; or Babbie, 1973.) In addition, we applied the internal criteria set by those responsible for the survey, such as USDA's own standards for precision or DOL's guidelines for sample size.

The strength of our application of the error profile is the advantage of a systematic examination of potential errors that can affect the adequacy of survey findings. For our technical assessment, we examined the USDA and DOL surveys using a model of their four major operations: (1) survey specification and implementation, which covers the definition and operationalization of survey objectives; (2) sampling design and implementation, which addresses the sampling plan to identify eligible respondents

and select certain ones for interview; (3) observational design and implementation, which covers questionnaire development, data collection procedures, and interviewer selection and training; and (4) analysis, which includes preparation of data and statistical analysis. Each operation of the survey is inspected for potential sources of error or bias (and in the case of multiple prevailing wage surveys, for consistency between the surveys).

The descriptive task for surveys is to provide accurate estimates of the characteristics within a population (such as the average hourly wage for all hired field and livestock workers in a four-state region during the week of the survey) based on the survey data. Error or bias can enter into any operation of the survey and cause the estimates derived from the survey to be of questionable adequacy. With regard to each of the four major operations discussed above, we established the following criteria for assessing their quality:

- For the first operation, survey specification and implementation, the most important criterion is clear definitions. The characteristics measured, the target population, and timing of the survey must be defined to the point that the survey can be administered with reasonable expectation of reliable and valid data.
- The critical task for the second operation, sampling design and implementation, is to prevent sampling bias, that is, to ensure that the sample adequately represents differences existing in the population. The first step is to provide a list (called a sampling frame) of all units in the population. The usual ways to ensure the representativeness of the sampling frame are to include all, or nearly all, units in the population (such as all growers with hired workers) and derive the list by a process that avoids selecting units of one type (such as only growers hiring more than 10 workers). Next, a sample, which is a list of respondents from whom information will be sought, must be drawn from the sampling frame in such a manner that representativeness of the population is maintained. The usual approaches in maintaining representativeness are either to draw a probability sample by statistical methods or take the entire sampling frame as a census. For probability samples, the reliability of estimates is related to sample size; a larger sample generally has a smaller chance of error between the population estimate and the population value.
- For the third operation, observational design and implementation, concerns about bias and error center on the representativeness of the respondents from whom data are successfully gathered and the accuracy of the data gathered. The representativeness of data collected is

typically judged by evidence on response rates and nonresponse bias. The assumption is that if the response rate (the ratio of the number of successful interviews conducted or questionnaires completed to the number of eligible respondents in the sample) is high or nonresponse cases are similar to response cases based on available information, or both, then the more likely it is that the interviewed cases will adequately represent differences in the population. The representativeness of interviewed cases and the accuracy of data collected are known to be affected by many factors, including mode of interview, questionnaire design, and interviewers' practice.

- For the fourth operation, analysis, the data are often checked for errors before analysis is conducted. For example, one checking procedure consists of assessing the reasonableness of the reported values. In the analysis itself, choices among analysis procedures can bias findings, such as choosing adjustments or nonadjustment for nonresponse or selecting medians or means for a summary statistic. Further, a summary estimate may be misleading in the absence of further information indicating whether it represents a relatively uniform or a varied characteristic. The further information might be a measure of the variation around the estimate, the amount of possible error due to sampling, or the stability of the estimates.

Relevance of the Survey Data for Wage Protections

DOL needs reliable estimates to set wage protections that are fair to the interests of both H-2A growers and workers, but the adequacy of the wage protections does not solely depend on the quality of the surveys. Three questions about the relevance of the data put the protections into a broader perspective. First, how are the wage minimums related to the wages of U.S. workers employed in the same activities as H-2A workers? Second, does setting wage minimums equal to wages during the past season protect U.S. workers against past or future wage depression resulting from the employment of alien labor? Third, since adverse effect is not defined by statute, what protections do DOL's regulations provide U.S. workers relative to a possible range of meanings for adverse effect?

Our Evaluation Methodology: Recruitment Protections

We used a case study approach to address the third question concerning nonwage protections for domestic workers. Key elements of this approach include the choice of the case, the data collection methods, and the analysis and synthesis strategy.

Choice of Case Study Site

We decided to study job protections for U.S. workers by conducting case studies of recruitment of workers for tobacco crops in Virginia and North Carolina. We chose these locations because they seemed to promise the opportunity of comparing different recruitment practices. It appeared that domestic (or U.S.) workers were being hired in North Carolina, while in nearby Virginia a domestic labor shortage had been certified by DOL, and H-2A workers were being employed. As we will explain in chapter 3, the actual situation was somewhat different than expected.

Data Collection Methods

We followed the recruitment process of U.S. workers and the related protections under the H-2A program by means of one thorough case study of the full 1987 employment cycle, including job posting, recruiting, hiring, and on-the-job treatment. Because of the extended controversies (including numerous lawsuits) between growers and workers concerning the H-2A program's operation, we sought evidence from the multiple perspectives of the groups involved and from the historical perspective of the tobacco growing industry in the Piedmont region.

For the multiple perspectives, we reviewed records of the initial grower requests for foreign labor and the subsequent recruitment and hiring processes at two local employment service offices, the state headquarters, and the Philadelphia regional Employment and Training Administration (ETA) office of DOL. We interviewed six officials from all three levels and observed the Philadelphia DOL officials certifying the need for foreign labor. We met with 20 tobacco growers in both states, both those using foreign workers and those using only domestic labor. We also talked with three growers of other crops in the area where H-2A workers had not been needed, and with four contractors providing migrant workers in this area. We interviewed 74 individual U.S. and foreign farm workers, usually apart from their employer and, for the foreign workers, mainly in Spanish. For the 33 domestic workers referred to jobs in tobacco, we tried to maintain contact throughout the season, by letter and telephone, to document where the individuals worked and for how long. We interviewed several officials involved in job training and referral programs. We gathered statistics on welfare and other public assistance from state officials in both North Carolina and Virginia. Finally, we interviewed an employment service official in each of the two major labor supply states to which notices of the available jobs in Virginia had been sent.

For the historical perspective, we reconstructed the history of tobacco growing in the vicinity of our study, highlighting those changing labor

patterns that led tobacco growers to recruit H-2A workers in the 1970s. Information for our reconstruction of the history and technology of tobacco culture in the Piedmont region of Virginia and North Carolina came from state documents, grower informants, and agro-economic experts.

Analysis and Synthesis Strategy

We reviewed the entire body of data to reach conclusions about whether, in the case study example, there was a supply of domestic labor, whether it had been effectively located by the recruitment activities we observed, and whether other nonwage protections for domestic workers were in effect. Consistency of information provided by the various sources—growers, officials, and workers—provided one kind of support for conclusions. However, because H-2A workers have been certified in prior years, the shortage, if real, is historical and not a recent phenomenon; there are thus prior causes that cannot be definitively reconstructed. Some data in the case study allowed us to rule out some explanations, and we could confirm some general interpretations from data we gathered while doing other parts of the study in other crop areas, such as our observations of the prevailing wage surveys and related interviews with growers and workers. Our synthesis attempted to provide a full description of the labor supply situation and a plausible reconstruction of the history that produced it.

The generality of our conclusions is limited by certain design elements (for example, our judgmental selection of three prevailing wage surveys to observe and our selection of the crop area for case study of recruitment and nonwage protections). In addition, our findings depend, in the case study especially, on qualitative data. The overall strength of the evaluation is that it illuminates the underlying processes of the protections in ways that could not have been captured by other designs.

Report Organization

The three questions we have posed are addressed in the following two chapters. In chapter 2, we treat questions 1 and 2 concerning the adequacy of the two surveys used to calculate wage minimums to protect U.S. workers from possible adverse effect arising from the H-2A program. In chapter 3, we focus on question 3 concerning the job protections afforded by DOL certification procedures for labor shortages.

Adequacy of Two Surveys and Their Relevance to Wage Protections for U.S. Workers

We were asked to evaluate the adequacy of the two surveys underlying DOL's wage protections under the H-2A program. The USDA Agricultural Labor Survey and the DOL-sponsored prevailing wage surveys provide separate bases for setting a minimum wage. DOL regulations require employers with H-2A workers to pay their H-2A and domestic workers at least the highest rate from among DOL's minimum hourly wage (AEWR), the prevailing wage, and the federal or state statutory minimum wage. The USDA survey provides the data for regional AEWRs, expressed as an hourly rate. The DOL sponsored surveys provide the prevailing wages as either an hourly rate or a piece rate, depending upon local practice, for a particular crop activity (such as strip picking apples) in an area within a state.

We found that the USDA survey and, to various extents, the prevailing wage surveys conform to survey practices conventionally considered sound. However, the precision or reliability of USDA wage estimates used by DOL to set AEWRs is largely unexamined and may be undesirably low for some regions of the country. The prevailing wage surveys vary considerably in procedures; some followed dubious survey practices and some ranked relatively low on various conventional indicators of quality. These problems are likely to have had measurable effects on quality, in some areas more than in others. Although tracking the general effects of the methodological and procedural flaws we found in the surveys was beyond the scope of our study, we do provide examples of specific individual effects that show the importance of the problems relative to survey outcomes.

In this chapter, we will evaluate first the USDA survey used to set AEWRs and then the DOL-sponsored survey used to set prevailing wages. However, the adequacy of the wage protections is not purely a matter of the technical quality of the surveys. It also rests on the relevance of the data to the purpose of preventing adverse effects on U.S. workers' wages. Here, we are led to raise three broad questions concerning the application of the survey data under DOL's Interim Final Rule of June 1, 1987, which became effective during the time of our review. First, what populations of farmworkers are targeted by the two types of survey designed to protect the wages of U.S. workers employed similarly to H-2A workers? Second, do minimum wages based on estimates of present wages protect the wages of U.S. workers from the potentially wage depressing effects of past or future employment of alien labor? Third, relative to a range of possible meanings for adverse effect, what protections do current rules afford U.S. workers?

USDA Agricultural Labor Survey

We found some strengths in all operations of the USDA survey. First, the specifications of the survey's objectives, target population, and some potential limitations are clearly documented. Second, the sampling design includes a second sampling frame to compensate for the undercoverage inherent in the primary sampling frame. Third, the observational implementation results in a relatively high response rate. Finally, the analysis proceeds with error checking and data analysis at both state and federal levels.

However, the survey also has potential weaknesses. As shown in our summary assessment of the USDA survey in table 2.1, the survey has at least one identifiable source of potential weakness in three of the four survey operations we examined. In the full assessment following the table, special attention is given to the annual estimates for field and livestock workers combined, because these wage estimates are used by DOL to set AEWRs. (Some of our criticisms are thus more relevant to DOL's use of the survey than to the survey itself.)

Table 2.1: Assessing Conformity of the USDA Agricultural Labor Survey With Principles of Survey Design and Implementation[a]

Survey operation	Assessment
Specification and implementation	Clearly stated and defined objectives
	Clearly identified target population and some limitations of the survey
Sampling design and implementation	Dual sampling frames for more complete coverage
	Rotation of respondents to reduce sampling error
	Minimal documentation about determining sample sizes
	Unknown population coverage
	Samples for some regions may be too small
Observational design and implementation	Relatively high response rate (85 percent)
	Enumerator training of unknown effectiveness
	Unknown characteristics of nonrespondents
	No systematic assessment of enumerator effectiveness
Analysis	Specific precision criteria
	Systems of analysis at state and federal level
	Less precise estimates in some regions
	Questionable reliability of data on hours worked for converting piece rates and other rates to hourly wages
	Limited reporting of sampling error ranges

[a]These principles include both general conventions of sound practices and specific standards set by USDA for the surveys

Survey Specification and Implementation

The Agricultural Labor Survey (ALS), conducted by the U.S. Department of Agriculture (USDA), is a probability survey designed to collect reliable data on farm employment, hours worked, and wages paid. The target population is all farm operators and agricultural service firms. Relevant information is collected on self-employed, unpaid, and hired farmworkers.

Although the current estimating program was designed to measure the relative change in wage rates primarily for calculating the Parity Index (an index of prices paid by farmers), DOL has negotiated with USDA in the past about various design options that would better serve DOL's purposes. Under June 1987 rules, DOL sets AEWRs equal to USDA's regional or statewide (for three states) estimates of the annual average hourly wage for field and livestock workers, a subgroup of all hired workers involved in many occupations, including those in which H-2A workers are employed. (These annual wage estimates are averages of the quarterly estimates weighted by the reported number of hours worked during the week of the survey.)

Since 1984, the ALS has been conducted quarterly at an annual cost of approximately $2.5 million. (From the second quarter of 1981 to 1983, the survey was conducted annually; from January 1975 to the second quarter of 1981, the survey was conducted quarterly; prior to 1975, the survey was conducted monthly.) The January survey collects data from seven states (California, Florida, Hawaii, Texas, Oklahoma, Arizona, and New Mexico). The April, July, and October administrations of the survey are conducted in all states except Alaska.

Estimates of agricultural employment and wages are published quarterly as well as annually (averaged across the quarterly estimates) for 3 states, 15 regions, and the nation. The hourly wage estimates are also published by method of pay (all methods, piece rate, hourly, and other) and type of work (field, livestock, field and livestock combined, supervisory, and other). Wage estimates do not include the values of any benefits, such as food, housing, or transportation. Estimates for agricultural service workers (that is, workers provided to growers through custom service units and performing tasks such as harvesting, crop preparation, soil testing, veterinary services, sheep shearing, and farm management services) are published only for California, Florida, and the nation as a whole.

Sampling Design and Implementation

The ALS utilizes two sampling frames: a list frame and an area frame. The list frame is a stratified (by size of farm operation) random sample of the names of farm and ranch operators likely to hire agricultural workers. (Fifty percent of the list sample is rotated for use in the survey of the following quarter, a practice which increases the reliability of estimated trends.) Farms and ranches "likely to use hired labor" are defined as those with gross values of sales exceeding $100,000 ($80,000 in some selected states). The area frame contains all land units in the nation and is used to identify farm and ranch operators to compensate for incompleteness in the list frame. The USDA reports that in recent surveys about two-thirds of the hired worker estimate came from the list frame and one-third from the area frame.

We believe that USDA's dual sampling frames constitute a reasonable design for providing full coverage of the farm population. Nevertheless, we would like some confirming evidence that the implementation of this sampling design produced full coverage. (USDA officials told us that they have not developed this confirming evidence.)

According to USDA officials, the best available information on the farm population does not provide an adequate basis on which to judge ALS's coverage of the farm population. The Agricultural Statistics Board estimates approximately 2.2 million farms existed in the U.S. in 1987, whereas the ALS (which is designed to estimate farm labor rather than the number of farms) purports to represent roughly 1.4 million farms. However, a USDA official stated that the estimates from the two sources are not strictly comparable because of the different definitions of farms that primarily affect the screening of small farms for inclusion in the surveys. (A large proportion of U.S. farms are small and most likely do not hire workers; the USDA reports that about 53 percent of the 2.2 million farms in 1987 had gross values of sales under $10,000.)

We found a second potential weakness, besides the uncertain coverage of the farm population, in the implementation of sampling. As will be examined in the analysis operation of the USDA survey, the October quarterly wage estimates for at least three regions have potential errors resulting from random variations between possible samples selected for the survey (called sampling errors) that are large enough to prevent reliable tracking of regional wages trends for field and livestock workers. Since sample size is a main determinant of sampling error, we believe that the sample sizes for field and livestock workers in some regions are probably too small for the purpose of identifying their wage trends.

Observational Design and Implementation

The ALS is a carefully planned and designed survey instrument. However, there are three problems associated with the ALS in the area of observational design and implementation that could affect the potential usefulness of the wage estimates: (1) the training of field enumerators, (2) the reliability of the data collected on piece rates, and (3) the impact of nonresponse bias.

First, USDA has developed enumerator training guidelines to assure accuracy and consistency in the collection of ALS data. However, the actual training is the responsibility of the State Statistical Offices (SSOS), and little information exists regarding the comparability or effectiveness of the training across the various state offices. Further, individual enumerator performance, although under supervisory monitoring, is not formally measured. A 1987 USDA staff report has recommended additional training of enumerators in view of slight increases in refusal rates and the large percentage of interviews conducted with someone other than the operator of the farm.

A second potential weakness deals with the quality of some of the data that are collected and subsequently used to derive the wage estimates. Regardless of method of pay—hourly rate, piece rate, or other (such as salary)—enumerators gather information on the total gross wages and total hours worked; the ratio of the former to the latter then becomes the hourly rate. A USDA official expressed concern that the reported hours worked for workers paid by piece rates or on salary—perhaps because accurate records on the numbers of hours worked are not required by the employer to calculate the wages or earnings of these workers—are not as reliable as the data collected on flat hourly rates. Since reported hours from all methods of pay are combined to calculate an overall hourly wage rate for field and livestock workers, the hourly data may introduce a degree of error into these wage estimates. However, the impact of this potential error is limited because most hired workers (71 percent in the July 1987 survey) are paid hourly rates.

Finally, on the average, ALS collects usable data from approximately 85 percent of all the farms and ranches it contacts. However, there is little or no information regarding the approximately 15 percent of the reports that are not usable. If those who do not respond are different than those who do respond, the estimates may be biased. Nevertheless, relative to standards for survey research, 85 percent is an admirable response rate, which probably limits any adverse impact arising from response bias.

Analysis

Many activities can be categorized under analysis: data input, cleaning and editing, imputation, estimation, and quality control. For ALS, we examined the USDA's procedures for data input, cleaning and editing, imputation, and estimation.

Our examination revealed that although there is a system of computer programs developed specifically for the SSOs to organize, clean, and edit the data (while also flagging problem items or cases), there was not enough information available for us to assess the system nor the effects of any problems associated with it.

We did find, however, evidence regarding USDA's assessment of the precision or reliability of its own estimates. USDA designs the survey to maintain target levels of precision in each region for its estimates of all hired farmworkers. (The target levels are measured as coefficients of variation, which are measures of relative dispersion around the estimates.) Further, USDA officials told us in an interview that coefficients of variation (CV) over 10 percent for regional all-hired wage estimates would not be statistically acceptable.

We found that 12 of the 18 regional estimates for the July 1987 wages of all hired farmworkers fell within USDA's target level for precision. None fell within USDA's range for statistical unacceptability. (See "all hired wage rates" in table I.1 in appendix I for a comparison between target and actual CVs for the July 1987 survey.) Although USDA sets CV targets for the wage rates for all hired farmworkers, the CVs for the wages of field and livestock workers may be higher.

The problem indicated by higher coefficients of variation to the reliability of the wage estimates is more directly interpretable by inspecting the standard errors for the regions. For a probability sample, the difference between the population estimate from different samples and the true population value is known as sampling error. Sampling error is usually measured as standard error, which provides an estimate of the chances that the sample estimate lies within a certain distance from the true value. In 68 out of 100 chances, the true value is expected to be between 1 standard error above and 1 standard error below the sample estimate. For example, the Northeast I region estimate for field and livestock workers in October 1987 is $4.42 per hour, and the standard error is $.13; thus, we are 68 percent confident that the true average wage is between $4.55 and $4.29.

In the October 1987 survey, the regions with large coefficients of variation also tend to have relatively large standard errors, rendering the estimates for those regions less reliable. As shown in table 2.2, most regions have standard errors for the wages of field and livestock workers below $.24, but the Northeast II region, the North Plains region, and Florida have standard errors of $.60, $.46, and $.43, respectively. Thus, for Florida we would be 68 percent confident that the true wage for field and livestock workers falls between the relatively wide range of $4.22 to $5.08.

Table 2.2: Field and Livestock Workers' Combined Wages, October 1987

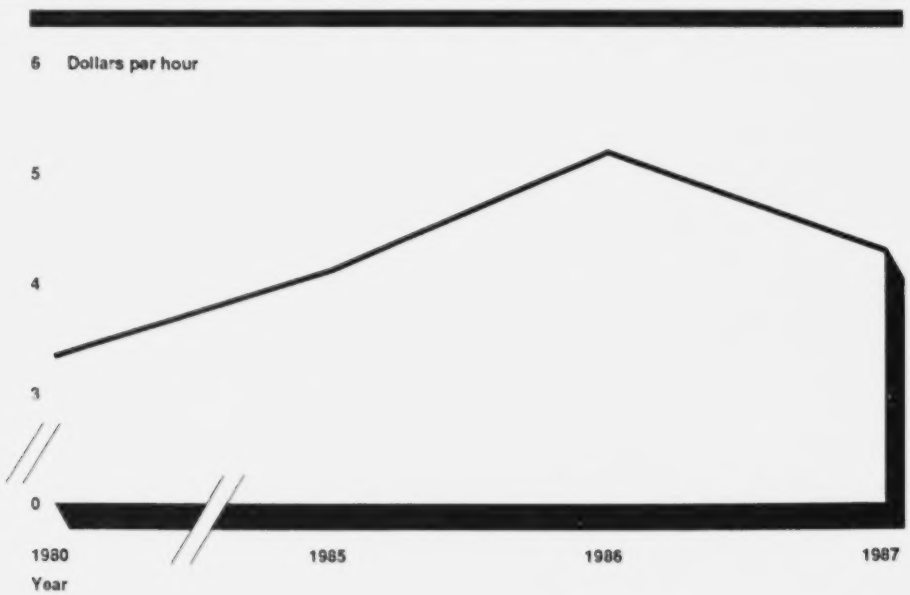
Region[a]	Number of reports	Hourly wage rate	Standard error	Coefficient of variation
Northeast I	443	$4.42	$.13	3.0%
Northeast II	193	4.99	.60	11.2
Appalachian I	330	4.49	.16	3.4
Appalachian II	156	3.98	.16	4.0
Southeast I	246	3.84	.20	5.1
Florida	166	4.65	.43	9.3
Lake	311	4.35	.21	4.7
Cornbelt I	263	4.42	.20	4.6
Cornbelt II	139	4.18	.13	3.1
Delta	390	3.94	.10	2.4
Northern Plains	126	4.35	.46	11.2
Southern Plains	291	4.65	.23	4.7
Mountain I	112	4.21	.16	3.8
Mountain II	121	4.49	.11	2.4
Mountain III	205	4.36	.17	3.8
Pacific I	294	6.04	.20	3.2
California	512	5.32	.15	2.8
Hawaii	124	7.62	.09	1.2
U.S. total	**4,422**	**4.64**	**.09**	**1.9**

[a]See appendix I for a description of regions.
Source: USDA, January 25, 1988.

Another analysis issue that we examined relates to the reliability of the trend estimates. As shown in figures 2.1 and 2.2, the trends for annual wage estimates for field and livestock workers (the estimates used to set AEWRs) can vary markedly between regions; in the Mountain II and Northeast II regions during 1980 and 1985-1987, the estimates rose and fell at different rates and in different directions. (Changes to the USDA survey make the annual estimates for 1981 through 1984 noncomparable to earlier and later estimates.) Although the contrasting trends

may truly represent regional differences, they could also potentially signal unreliable estimates due to either nonsampling or sampling errors. If the estimates are relatively unreliable compared to the size of annual changes in wages, then the wage trends, and the changes in AEWRs based on them, might be reflecting only the imprecision of the estimates rather than real changes. (See table I.3 in appendix I for the wage trends for all regions.)

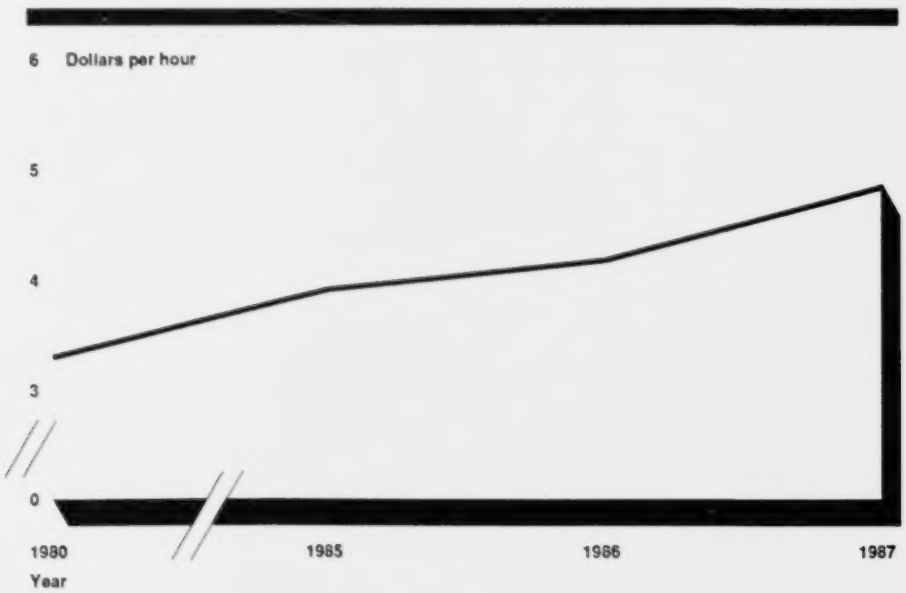
Figure 2.1: Wage Rates for Field and Livestock Workers, Annual Averages for 1980, 1985-87, Mountain II Region



Source: USDA

We are unable to examine the reliability of the estimates for annual average wages attributable to sampling error because USDA has never calculated these sampling errors. Thus, we lack a critical piece of information for interpreting the reliability of the annual estimates. We are therefore unable to perform statistical tests on whether changes in the estimated wage rates can reliably detect real changes in the wages rates. Nor has USDA routinely calculated the standard errors associated with the estimated wages for field and livestock workers for quarterly surveys prior to its October 1987 survey; these standard errors for this

Figure 2.2: Wage Rates for Field and Livestock Workers, Annual Averages for 1980, 1985-87, Northeast II Region



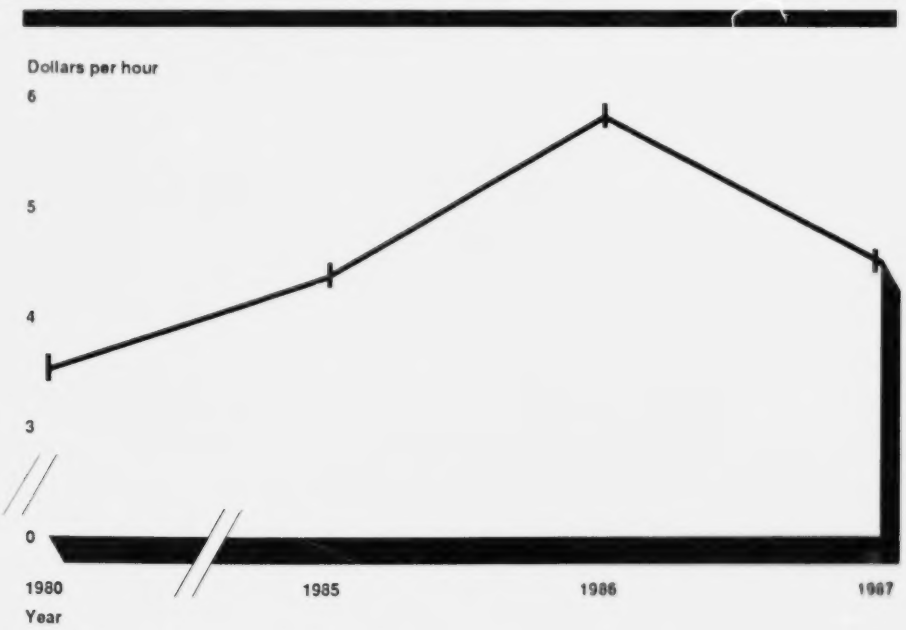
Source: USDA

single quarter are thus the best available information on the likely reliability of the annual estimates (which are weighted averages of the quarterly estimates).

Assuming that the sampling error associated with the field and livestock worker wage estimate for October 1987 was constant for prior October surveys, we find, as shown in figure 2.3, that in the Mountain II region, the change in the wage rate over time may in fact be a function of changing economic conditions (as evidenced by the large wage rate changes relative to the small sampling error associated with the estimate). In the Northeast II region in figure 2.4 (see p. 34), this may in fact not be the case. The relatively large sampling error (represented by the bars around the point estimate in the figure) associated with the small changes in the wage estimate may mean that the change could be explained by the unreliability of the wage estimate.

If the reliability of the annual estimates parallel those from the October surveys, changes in DOL's wage minimums for some regions could be inappropriately reflecting chance variation in the samples rather than actual changes in a region's wages. For example, the October quarterly

Figure 2.3: Wage Rates for Field and Livestock Workers, October Quarterly Survey, Mountain II Region



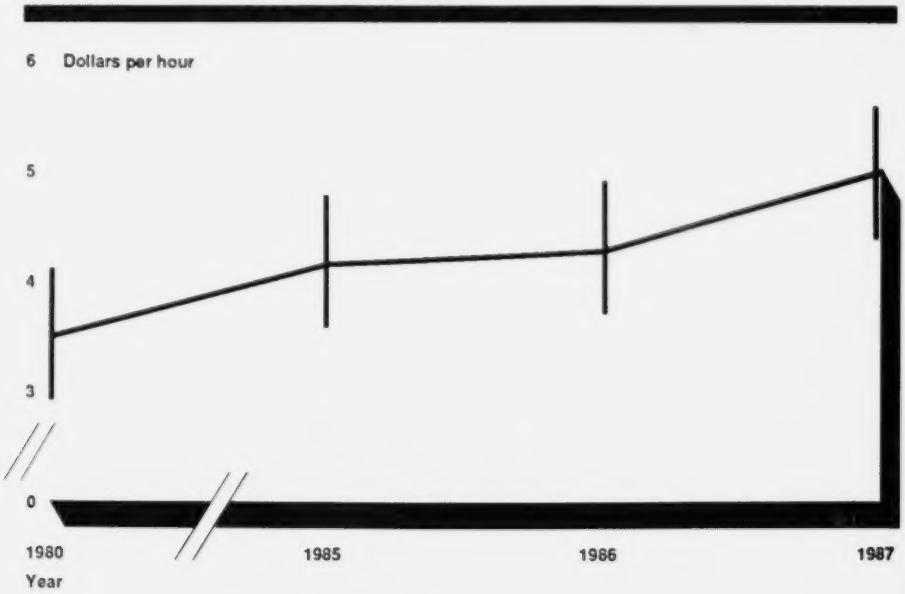
Note: The vertical bars equal one standard error above and below the wage estimate. All standard errors are set equal to the standard error for the October 1987 survey.

Source: USDA

estimates for the Northeast II region indicate a change from $4.28 to $4.99 between 1986 and 1987, a change of $.71. However, we are 68 percent confident that the average wage in October 1986 was $3.68 to $4.88 (assuming the 1987 standard error) and the average wage in October 1987 was $4.39 to $5.59. Since these interval estimates overlap for the two years, the change of $.71 could be a product of sampling error rather than actual wage changes in the Northeast II region.

Moreover, the above analysis assumes a relatively high risk of error, that is, that the true average wage is not within our estimated interval. At the 68 percent level of confidence, we are at risk of being wrong for about a third of our estimates. If we wanted to be more confident about our estimate for a given sample, we can extend the interval. We could be 95 percent confident (a conventional level of confidence) if we use about two standard errors above and below the sample estimate as our interval estimate of the average wage. In the above instance, to be 95 percent confident of our estimate for each year, each interval estimate would

Figure 2.4: Wage Rates for Field and Livestock Workers, October Quarterly Survey, Northeast II Region



Note: The vertical bars equal one standard error above and below the wage estimate. All standard errors are set equal to the standard error for the October 1987 survey.

Source: USDA

range about $1.20 (instead of $.60) above and below the sample estimate, making even a large wage trend difficult to detect with any reliability.

To reliably estimate the October wages of field and livestock workers at either the 68 or 95 percent level of confidence, the standard errors must thus be lowered for at least some regions. The two ways that standard errors can be lowered is to reduce the variability in surveyed wages or to increase the sample size. Although analysis of unusual values might reveal reasons and means to reduce the variability in the surveyed wages in some regions, the reduction of standard errors is commonly pursued through increasing sample size.

For the purpose of setting AEWRs that reliably reflect general farm wages, the calculation of standard errors for the annual regional estimates of the average wages for field and livestock workers is a critical starting point for identifying needed changes, if any, to the survey. Although data from the October quarter surveys are the best available

evidence on the likely standard errors for the annual estimates, these data may overestimate the standard errors for the annual estimates. The annual estimates are averaged over those of the quarterly surveys, and the October quarter survey may have larger standard errors than other quarterly surveys.

The Prevailing Wage Rate Surveys

Prevailing wage surveys are used to set wage minimums for all intrastate and interstate agricultural job orders circulated through the Employment Service system, and H-2A employers must comply with the higher of these minimum wage requirements or AEWRs. The 15 crop surveys we examined varied considerably in procedures; some surveys included practices not generally considered technically sound or rated low on conventional indicators of survey quality. Table 2.3 summarizes our assessment. A full discussion of each point follows the table.

Table 2.3: Assessing Conformity of Prevailing Wage Surveys With Principles of Survey Design and Implementation[a]

Survey operation	Assessment
Specifications and implementation	Some inconsistency in definition of target population regarding undocumented workers
Sampling design and implementation	
Sampling frame	Adequacy not systematically examined by us; one state official questioned the adequacy of relying on the knowledge of local representatives for two surveys; some reports of difficulties in compiling exhaustive and exclusive lists
Sampling procedure	Four of 15 crop surveys did not follow DOL guidance for when to use a probability sample; potential reduction in survey efficiency
Observational design and implementation	
Response rate	Routinely available data are questionable and inadequate for necessary calculations
	Best available information ranks 19 crop activity surveys as 8 high (80 percent or higher), 1 medium to high, 5 medium (50 to 79 percent), 4 low (less than 50 percent), and 1 no basis to judge.[b]
Nonresponse bias	Some reports of non-H-2A growers being less willing to participate in the survey
Interview form	Not designed to facilitate data collection; excludes items necessary for verifying employer information; includes an item of unclear purpose
	Instructions for completion are generally thorough, but several gaps exist
Interviewer training	Formal training session for 9 of 15 surveys
Interviewers	Noted differences in efforts and abilities of interviewers seeking verifying information from workers
Analysis	
Calculations	In 20 summary reports submitted to DOL, 5 had at least one miscalculated and erroneous finding (13 percent of 60 findings on the 20 reports were erroneous)
Representativeness	Greater variation in units of payment and rates made setting typical wage more inherently difficult in some crops
	Under some circumstances, the measure is unstable since the nonparticipation of a single employer can substantially alter findings; under other circumstances, the measure is stabilized by wage minimums set by DOL regulations

[a]These principles include both general conventions of sound practices and specific standards set by DOL for the surveys.

[b]The number of surveys of crop activity exceeds the number of surveys of crops. For example, a survey on the apple crop might include survey information on both spot picking and strip picking activities.

Survey Specifications and Implementation

DOL is ultimately responsible for the prevailing wage survey, but state employment agencies actually conduct the individual surveys. The

national and regional offices of DOL's Employment and Training Administration (ETA) are responsible for developing the guidelines and helping the states interpret them. For instance, ETA provides the ET Handbook No. 385 that offers guidance on planning the survey and completing the interview records and summary report form. In addition, ETA provides some training for state employment agencies.

In practice, the actual oversight provided by ETA appears to be limited. ETA officials at the national level told us that they do not know much about the field implementation of the survey and acknowledged that oversight, which is left to the regional offices, has a low priority at the national level. They also stated that they have few, if any, expectations concerning quality; they merely expect "reasonableness." We did not attempt to ascertain the amount of assistance that ETA regional staff provide in every state; however, the state employment staffs from our site visits claimed to have received only limited technical assistance beyond initial training. Further, officials from three state agencies raised the issue of the difficulty of getting responses from ETA to their repeated requests for funding, forms, or technical clarifications.

Unlike the case of ALS, in which a multi-purpose survey has been adapted for use in the H-2A program, a central purpose of the prevailing wage surveys is to provide accurate farm wage data to implement DOL regulations concerning wage minimums under the H-2A program. The offered wages in employers' requests for certification of H-2A workers must meet certain wage minimums tied to the prevailing wage finding (or AEWR or a statutory minimum wage). Although the survey can be initiated for a variety of reasons, all 15 prevailing wage surveys (covering 19 crop activities) that we examined were initiated because H-2A workers were employed in the current season or employers' requests for H-2A workers were expected in the next season.

The targeted population for these prevailing wage surveys is U.S. workers employed in the same crop activity as H-2A workers. Each prevailing wage survey focuses on a particular job in a specific crop located in a wage reporting area (statewide or smaller). A job that is different enough to create a different wage structure should be treated separately. For instance, one survey effort focused on raspberry picking in four Oregon counties, and wage findings were made separately for picking for the cannery and for picking for fresh markets because these two types of picking are different enough to merit different pay rates. Employers are the primary source of the survey information. Employers

of H-2A workers are also surveyed, but only their domestic workers should be enumerated.

The survey is typically conducted once per season. ETA recommends completing the survey in three days and not exceeding one week. Interviewers collect data to make a finding on prevailing wages as well as to compute productivity and average hourly earnings for piece rate workers. They query growers for information about the number of foreign contract workers hired, the number of and wage rate for domestic hired workers, the intrastate or interstate origin of these domestic workers, the number of hours the domestic workers worked, and the number of units produced during those hours. The interviewer may note additional pertinent information, such as variables affecting wage rates or crop conditions. Information is also gathered from some workers to verify some of the employer-supplied information.

We found that state employment agencies vary somewhat in their survey procedures, including the specification of the surveyed workers. ETA's survey handbook specifies gathering data on "domestic hired workers" but does not discuss the handling of undocumented workers. (The issue became more complicated with DOL's June 1987 regulations that define SAWs and, under certain circumstances for 1987, eligible SAWs as U.S. workers.) State agencies conducting the surveys for the 1987 season were not uniformly consistent in their instructions regarding undocumented workers. The Seattle regional monitor reported notifying states in his region to exclude only H-2A workers, thereby in effect giving direction to include undocumented workers. In other regions, officials at the state agencies who answered the question told us that enumerators were instructed to exclude all foreign workers. (One exception was a single survey that included foreign workers who may have been H-2A workers or undocumented workers.)

Since the prevailing wage estimate is influenced more by larger employers, it will be more influenced by employers of undocumented workers if these workers are counted in the survey. The effect on the estimate, if any, would be greater in those areas with higher penetration of undocumented workers (which varies by state and crop). At the extreme, a meaningful estimate of domestic workers' wages may not be derivable if undocumented or H-2A workers predominate among a crop work force. However, the actual effect on prevailing wage rates of differing instructions regarding undocumented workers is unknown. First, we have no information on how reliably enumerators could and did exclude undocumented workers even if so instructed. Second, we do not know the likely

size or direction of the effect, which depends on whether undocumented workers are paid less, equal to, or more than the prevailing wage among domestic workers. (This issue will become moot if sanctions against employers—which become effective for employers of seasonal agricultural workers on December 1, 1988—effectively deter the employment of undocumented workers.)

Sampling Design and Implementation

The Frame

The first step after survey specification was the development of a list of growers eligible for inclusion in the survey. Employment services variously relied on information from state records (such as those for unemployment insurance), state crop commissions, growers' associations, local employment service representatives, and other sources to create or update their lists of all growers in a crop.

The sampling list should ideally only include all growers eligible for the survey. If many of those listed are ineligible and are not removed prior to sampling or data gathering, then inefficiencies may arise. Interviewers may spend time contacting ineligible growers rather than collecting data, and, if the survey is a sample survey, the sample may have to be supplemented to maintain adequate sample size. These inefficiencies will not necessarily affect the accuracy of findings, unless the time and resources used by interviewers to identify eligible growers result in less usable data being gathered. On the other hand, if not all of the eligible growers are on the list, the findings may not be representative of all growers.

Although we did not independently check the adequacy of the lists used for the surveys, we did identify some of the reasons why adequate lists may be difficult to compile. State records, such as those for unemployment insurance, may not cover all eligible growers or may not identify growers in a particular crop. Information may be dated, which is more of a problem for crops in which growers are more likely to enter and leave the business with greater frequency. Local agents may create or maintain the list based on their assumed knowledge of local growers, but one state official doubted the accuracy of two survey lists developed through this method. Working with a tentative list of about 15,000 growers, one state agency attempted a preliminary screening survey to

develop the sampling list, but received a very inadequate response rate of 20 percent.

Procedure for Sample Selection

The survey handbook directs state agencies to draw a sample in such a manner that the survey findings based on the sample will be representative of the wage rates paid in the crop activity. It further specifies that employers with variously sized work forces from all sectors of the surveyed area should be included and the sample should be drawn by using probability methods. With few workers in the crop activity in the area, the state agencies are to draw samples of growers representing larger proportions of the workers, and if there are fewer than 349 workers, then a census (which includes all workers and thus all employers) should be done.

Most (10 of 15) of the crop wage surveys did not use a statistical sample. Four of these 10 surveys—Connecticut tobacco, Nevada irrigation, West Virginia apples, and Virginia apples—should have used statistical sampling according to the handbook criterion of 349 workers in the crop activity. Deviation from this guideline may be reasonable if there are only a few employers. For example, a survey of all Connecticut tobacco growers is a reasonable strategy because there are only six eligible growers in Connecticut who happen to have many employees. Indeed, those 10 surveys without a statistical sample adopted the strategy of trying to interview as many employers as possible. Since a sample survey is not inherently less prone to error than a census, we observe that survey practices may not conform with DOL guidelines but that the quality of either type of survey depends on implementation. (A sample survey, however, is more efficient than a census for surveying large populations, and may thus produce higher quality results for a given amount of time and resources.)

Observational Design and Implementation

One indicator of the quality of data collection procedures is response rate. A high response rate lessens the likelihood of response bias. Although opinions may vary, we have defined 80 percent and above as a high response rate, 50 to 79 percent as moderate, and below 50 percent as low. This categorization does not provide a definitive judgment of the quality of the surveys, since changing these cutoffs would change the judgments for some surveys. However, it does provide a means for discussing the validity of the surveys as measured by their response rates.

Those surveys for which we have data to calculate response rates for either the 1987 or 1986 season vary greatly in quality of data collection as indicated by response rate of growers. (See table 2.4.) Response rates range from 23 to 100 percent. Applying our rating categories to these 19 surveys, 8 have high response rates, 1 has estimated response rates (based on different assumptions about the eligible population) spanning high to medium, 5 have medium response rates, and 4 have low response rates. (We had insufficient information to calculate a response rate for one survey.) Thus, response rates suggest that the quality of at least the lowest four surveys on this measure is questionable.

Table 2.4: Response Rates and Worker Coverage for Prevailing Wage Surveys

State	Crop or area	Growers' response rate[a]	U.S. workers covered[b]
Nonstatistical sample			
Connecticut	Tobacco	100%	74%
	Apples	90	113
Maine	Apples		
	Strip picking	65[c]	45[c]
	Spot picking	90[c]	86[c]
Montana	Irrigation		
	Sprinkler	28[c]	100[c]
	Flood	23[c]	100[c]
Nevada	Irrigation	46	39
New Hampshire	Apples	92[c]	95[c]
Oregon	Apples	100	43
West Virginia	Apples	57	77
Virginia	Apples		
	Roanoke	70	64
	Winchester	53	105
	Marion-Galax	91	103
	Cabbage	33	100
Statistical sample			
Idaho	Irrigation	[d]	[e]
Oregon	Pears	95	
	Raspberries	63–83	
	Strawberries	97	
Washington	Apples	56–71	

[a]The ratio of number of interviewed employers to estimated number of employers in the crop activity. For statistical sample surveys, the ratio of interviewed growers to the number of eligible growers in the sample; estimated ranges based on different assumptions about number of eligible employers among those not interviewed.

[b]The ratio of the number of domestic hired workers represented by the survey to the estimated total in the crop activity.

[c]Data from the 1986 season.

[d]Data unavailable for calculation.

[e]Not applicable as measure of quality for sample survey.

Data source: Domestic Agricultural In-Season Wage Report (Form ETA 232), 1987 season or, if unavailable, for 1986 season; cognizant state agency for statistical sample surveys.

Although these response rates are the best available indicator of the representativeness of the data collected, the utility of the indicator is limited for two reasons. The first limitation is that growers' response rate can be a misleading indicator of coverage of workers. A survey could include all employers with small operations and have a relatively high response rate but a lower rate of coverage of workers. Alternatively, if the survey included only large operations, it might have a lower response rate but higher coverage of workers. While the survey

should optimally represent employers of all sizes of work force, the loss of a large employer will have greater impact on the setting of the prevailing wage.

The second limitation for response rates—as well as employee coverage—as an indicator of quality arises from problems of data quality and availability. Although the handbook states that one purpose of the summary report sent to ETA is to evaluate wage survey procedures, the limited information found on the summary reports severely restricts the construction of adequate quality controls, such as either the response rate for growers or for workers covered. The data needed to calculate response rates—the ratio of the number who were successfully interviewed to eligible respondents—are missing from the summary survey report or are of questionable reliability. First, the number of eligible respondents was not reported for statistical samples. (We requested further information from the state agencies for our calculations.) Second, the estimates of number of employers and workers in the crop activity appear to be questionable in some cases. (Note in table 2.4 that some surveys based on these estimates covered a small percentage of growers but implausibly covered 100 or more percent of workers.) Third, the estimates of growers may include ineligible respondents, thus lowering response rates calculated on the estimates. For instance, the report on the West Virginia apple survey includes a note that some of the contacted growers were ineligible due to their having only H-2A workers or not picking at the time of the survey; recalculating the response rate based on these data changes it from 57 to 82 percent, thereby suggesting a survey of much better quality.

Another aspect of data collection quality is non-response bias. For example, if H-2A and non-H-2A growers tend to pay different rates, a disproportionate response rate by one or the other of these types of employer could critically influence the estimated prevailing rate. According to state employees involved in the Maine and New Hampshire surveys, those non-H-2A apple growers who tend to have small operations and hire local part-time workers can pay higher wage rates because they avoid costs that H-2A growers incur because of their workers (such as for housing and transportation) and their more commercial operations (such as the cost of apple storage, retailing, and packaging). In Maine, since H-2A growers were much more likely than non-H-2A growers to participate in the survey, the wages paid domestic workers by H-2A growers tend to set the prevailing wage. However, if H-2A and non-H-2A growers were equally likely to participate, the prevailing wage might have been set at the higher rate paid by those smaller, non-H-2A growers.

Our focus now turns to several factors of observational design and implementation—data collection procedures, questionnaires, interviewers and their training—that are known to potentially affect response rate, nonresponse bias, or data accuracy.

Data Collection Procedure

The handbook directs state agencies to rely substantially on personal employer interviews, but allows for limited supplementation through telephone or mail contacts. Although the handbook does not discuss the timing for initiating the survey, it does set a normal duration of three days and a limit of one week (unless the state agency is given prior approval for a survey of longer duration). For the surveys we examined, most state agencies sought to conduct the survey during the peak season of the crop.

A main concern with data collection procedures is their impact on the reliability of the data gathered. Two such factors which we examined that may affect reliability are mode of interview and timing of the survey. Modes of interview—personal, telephone, or mail—can affect both response rates and accuracy of the data gathered. As already indicated, a higher response rate allows less chance of significant response bias than a lower response rate. The timing of a survey can also potentially introduce a response bias because the same survey conducted at different times may reflect somewhat different populations and circumstances.

Timing of the Survey

The timing of the survey can affect the number of workers represented in the survey and the estimate of the prevailing wage. The number of employees and even the wages rates may vary over the season. Conducting a survey at the peak of the season is thus one method to gather wage data when most of the seasonal workers are likely to be available for interview. In some instances, the concept of a peak week may be difficult to apply because farms within a survey area and varieties within a surveyed crop (for example, types of apples) may not share a common peak week. Other activities, such as irrigation, may not have a clearly defined peak week.

We did not attempt to measure the potential impact of the actual timing of the surveys on their quality, but we did gather information on their timing. The survey period included times other than the peak week for 8 of the 15 surveys. In some cases, the state agencies decided to survey longer than the peak week to be more thorough (due in one case to great

travel distances). For some surveys, the survey week was not uniformly the peak week for all crop varieties and farms in the survey. In one case, a survey was delayed until the following week because heavy rains and a holiday fell during the week predicted to be peak, conditions which would likely result in low activity in the crop.

The Mode of Interview

The mode of interview can affect the reliability of the information gathered. For example, although mail surveys generally are a less costly mode of gathering data, they may produce less useful results than other modes of interviewing. In comparison to mail surveys, interviews (face-to-face and to a somewhat lesser extent the telephone variety) offer the opportunity for motivating the respondent to participate more fully and contribute more complete and accurate information. Mail surveys with response rates of 40 to 50 percent are often considered successful because higher, more useful response rates may be difficult to reach with this method, whereas for telephone or personal interviews, minimally acceptable response rates are often 75 percent.

Although the handbook specifies personal contacts as the preferred method of interview, many of the surveys relied substantially on either telephone interviews or mail surveys. (See table 2.5.) Two instances of mail surveys illustrate the response rate problem associated with this method. The response rates for the portions of the surveys using mail questionnaires for Virginia cabbage and Washington apples were respectively 12 and 36 percent. Given such low response rates, the representativeness of the data for this portion of the samples is questionable.

Table 2.5: Percent of Growers Surveyed by Different Methods

State	Crop	Mode of survey		
		Personal	Telephone	Mail
Virginia	Cabbage	24		76
Washington	Apples	59		41
Montana	Irrigation	48	52	
Nevada	Irrigation	60	40	
Oregon	Pears	74	26	
	Apples	80	20	
Idaho	Irrigation	87	13	
Oregon	Strawberries	96	4	
	Raspberries	98	2	
West Virginia	Apples	98	2	
Maine	Apples	100		
Connecticut	Apples	100		
	Tobacco	100		
New Hampshire	Apples	100		

Interview-Form Design and Instructions

ETA provides state employment agencies with forms to record interview data and instructions for their completion in the ET Handbook No. 385. The handbook directs interviewers to complete the Wage Survey Interview Record (Form ETA 232A) at the time of contact for the survey. This one-page form is designed to collect information from one employer about a single crop activity. The heading of the record includes spaces for identifying information about the location, crop, name of employer, number of foreign contract workers, and mode of interview. The first part of the form has columns and rows to record the number of domestic hired workers in crop activity by rate and by in-state or out-of-state origin of the workers. The second part, also composed of rows and columns, is for recording the data, by rate of pay, about productivity and the calculated average hourly earnings for piece rate workers. In addition, the second part also has space to record the number of worker interviews and their average hourly earnings, again by rate of pay. The third section is available for interviewers' comments, which are intended to distinguish factors affecting wage rates (such as crop conditions) or to clarify information in any other section of the form.

We observed some difficulties in the interview form and its instructions. First, the interview form appeared to be designed more as a tool for reporting than one for collecting data. Second, it excluded items necessary for routinely recording information and for verifying employer-provided data, and it included an item that cannot usefully verify

employer data. Third, the instructions for completing the form, although generally thorough, were inadequate in several respects. Each of these inadequacies is explained below.

First, the interview record provided by ETA, composed of spaces for recording items with brief identifying headings, provides little guidance to the interviewer. An interview schedule, on the other hand, can provide the interviewer with a script that can help ensure that the questions asked are uniform and in a logical sequence. We found that at least three state agencies modified the DOL form to convert it to a more usable interview schedule. For example, the Washington Employment Division replaced the interview record with a scripted interview schedule. In contrast to the assumption underlying the Wage Survey Interview Record that the interviewer can categorize workers as "interstate" or "in state," this interview schedule includes a question that asks the workers whether they originate from several possible places. Likewise, questions on this interview schedule clarify that the "total hours" and "total units of production" being discussed are for a specific date.

Second, the interview record appears to lack needed information and perhaps includes an unnecessary item. Although the handbook specifies that employer-supplied data must be verified through worker-supplied data, the Wage Survey Interview Record does not contain items adequate for this purpose. The only recorded data from worker interviews are the number of workers interviewed and their average hourly earnings. The latter item is perhaps unnecessary because it is inadequate to verify employer-supplied data. Since only a small percentage of a grower's workers are interviewed, average hourly earnings calculated from the self-reporting of these few workers cannot be used to verify average hourly earnings based on an employer's data covering all workers. Any differences in the computed figures are not clearly attributable to differences in reported hours or pay rates rather than to a nonrepresentative sample of interviewed workers. The data on pay rates needed from workers to verify employer's information are not recorded nor are the computations based on workers' interviews available for verification. (The three states that volunteered information about their adaptations of the interview record had created a supplementary form to record all information gathered from workers.)

Third, the guidance given by the interview form would be less critical for accurate and uniform interviewing if interviewers had thorough instructions about the Wage Survey Interview Record. In general, the instructions in the ET Handbook No. 385 are thorough, with item by

item instructions for completing the interview record. Nevertheless, ambiguities about the instructions exist. In particular, the instructions do not specify either the time basis for total hours or total production for calculating average hourly earnings (the Washington survey of apples was based on a single day; the Maine survey of apples on the survey week), the way to compute the average hourly earnings from workers' data, or how to handle discrepant data from workers and employers.

Training of Interviewers

Even if the interview record and its instructions were not fully adequate to guide interviewers, training or additional instructions might provide the needed guidance. Interviewers for most (but not all) surveys were formally trained for conducting the prevailing wage survey. State agencies held formal training sessions or provided individual training for interviewers who conducted 9 of the 15 surveys we examined. Moreover, state agencies had provided interviewer manuals or materials for 5 of the 15 surveys.

Although we did not systematically estimate the impact of training, our observations of the Oregon strawberry survey suggest that either interviewer quality or a lack of training may affect how correctly data are recorded. We observed that two interviewers—one who had received formal training as well as one who had not—did not fully understand how to record data on the interview forms.

Interviewers

All of the state agencies used their own employees as interviewers (although one state supplemented these with some temporary but recurrent hires). The interviewers are sometimes the local agricultural representatives (who are expected to be familiar with the growers). The number of interviewers varied considerably between surveys, reflecting such factors as the number of local employment offices in the surveyed area. Five surveys had a single interviewer, 8 surveys had 2 to 12 interviewers, and 2 surveys had 24 or more interviewers.

The efforts and abilities of an interviewer can affect the integrity of the information gathered. The integrity of the survey requires that interviewers will conscientiously attempt to contact and correctly interview those people assigned to them. However, interviewers may make errors despite their best efforts. In other cases, interviewers may not give their best efforts; interviewers may only interview convenient respondents or fill in items after a cursory interview or no interview at all.

We noticed on our site visits that interviewers differed greatly in their efforts and in their abilities to verify employer information. The handbook directs interviewers to survey an average of 10 percent of workers, for as many interviewed employers as possible, in order to verify the data gathered from employers. In two of our three site visits, we observed an interviewer who was not surveying the prescribed number of workers or adequately recording employee information. Although more than half (8 of 13) of the surveys had at least some bilingual interviewers or provision for bilingual aid, we observed instances of interviewers being unable to interview speakers of another language. (Bilingual skills may become a greater issue in the future due to the legalization of undocumented workers through the SAW program.) Conversely, we observed another interviewer who went beyond required efforts and requested growers' records to verify interview data.

Some state officials do not seem troubled by verification concerns. Two of our state agency respondents offered the observation that the employers' data on wage rates were usually accurate. Our respondent in West Virginia stated that there had never been a discrepancy in the last 20 years between the wages reported by growers and those reported by their workers. (However, it was unclear whether this opinion was well substantiated because he refused to tell us how many workers were interviewed for the 1987 season.) A state of Washington research analyst also reported her observations, and those of others involved in the survey, that workers' data on wage rates do not deviate from employers' data.

Analysis

Analysis of the survey data centers on making a prevailing wage rate finding. (A finding is a formal announcement of the prevailing wage.) In addition to a finding for all workers surveyed, prevailing wage findings are made separately for in state and for interstate workers; however, no finding is made for one of these categories if it represents less than 25 percent of the workers in the sample. The combined data from all employers and the prevailing wage findings are reported on the Domestic Agricultural In-Season Wage Report (Form ETA 232). The state employment agencies are responsible for making the finding, publishing the results in their Farm Labor Information Bulletin, and submitting Form ETA 232 to regional and national ETA offices for review and possible revision of the findings.

The prevailing wage is calculated by applying the "40 percent rule" or the "51 percent rule," which compute a mode or (approximately) a

median, respectively. The first step is to attempt to apply the 40 percent rule. This is done by listing all the units of payment found in the crop area survey (such as per bin, per pound, per hour). The unit of payment that includes the most workers is then identified, and the rates for that method of payment are listed. The mode—that is, the most frequent rate—is next identified. For example, if more workers in a crop area survey are paid on an hourly basis than by any other unit of payment, the hourly rate data are examined, and the most frequent rate of payment (say, $4.80 per hour) is ascertained. The mode will then become the prevailing wage if it passes the 40 percent rule, which means that at least 40 percent of the workers that were paid by that unit of payment (an hourly rate in our example) must be paid the mode rate ($4.80 in our example).

If the mode rate is based on less than 40 percent of the workers paid through that unit of payment, the 51 percent rule is applied instead. This rate—which approximates the median—is calculated by arraying the wage rates using the most common form of payment in descending order and determining the number of workers paid at each rate. Analysts count up from the lowest paid workers until they have counted 51 percent of the workers. The highest rate earned within this group becomes the prevailing wage. Note that the 51 percent rule and the 40 percent rule use the same subset of data from a crop area survey but calculate different statistics.[1]

We examined three issues relating to the quality of analysis for all of the state crops: (1) Was the finding correctly calculated? (2) How well do the prevailing wage findings—as measured by the 40 percent and 51 percent rules—represent the typical wage? (The issue of how well the finding represents the typical wage hinges on the variation in wage rates and units of payment as well as the measurement rules.) Finally, (3) how stable are the findings? We explored this final issue through further discussions with the employees in charge of the survey in two states.

We found that most, but not all, findings were correctly calculated by state agencies. The diversity of payment units and variation in rates in some crops make the findings less satisfactory representations of typical wages. Furthermore, under some circumstances, the measure could be

[1]The apparent reason for not relying upon the mode in cases where it represents less than 40 percent of the workers is that a smaller mode becomes a progressively less satisfactory summary of the distribution of wages. A median is evidently used rather than a mean because a median (or a mode) is less sensitive to extreme values than is a mean.

unstable based on the participation of a single employer or, alternatively, stabilized by several H-2A employers offering the minimum rates set by DOL regulations.

Calculation Errors

Based on handbook guidelines, state agencies had not correctly calculated 12 percent (7 of 60) of the prevailing wage findings in 20 Domestic Agricultural In-Season Wage Reports that we examined. (Each report cites three wage findings—or a "no finding"—for all workers, for in-state workers, and for interstate workers.) If we did not have 1987 data, we used 1986 data, if available. We also found two other apparent miscalculations that did not result in erroneous findings.

The seven errors, found in five reports, resulted from failures to conform to various guidelines. Two errors involved preparing data for calculation; in one case the number of workers for in-state and interstate did not sum to all workers, and in another case the rates were not arrayed by gross rates. Another mistake was caused by a failure to apply the 40 percent rule; apparently, the 40 percent minimum was calculated by the total workers rather than the number of workers in the largest pay unit category. Another error arose from a state agency's failure to set a prevailing wage for interstate workers, although that category met the threshold of 25 percent of the workers represented in the survey. In another case, the state agency rounded down when applying the 51 percent rule, but the ETA later revised the prevailing wage rate by rounding up.

These computational errors made at the state level may not impact the H-2A wage minimums for two reasons. First, since the minimum wage is based on only the highest rate found for either all, in-state, or interstate workers, regardless of correctness, a single finding can be irrelevant. Moreover, since the findings are reviewed at ETA's national office, the computational problems may have been corrected. (Since some of the summary reports were not submitted until after our period of investigation, we could not examine the review process at the ETA office in detail. An ETA official reported, however, that their review results in their accepting roughly 80 percent of the computations.)

Representativeness of Wage Findings

Wage findings can be more or less representative depending on the calculation rules and the extent of variations in the wage systems being summarized. First, the calculation rules direct the prevailing rate to be set only in the unit of payment category containing the most workers.

Thus, the wages of workers in other unit of payment categories are effectively excluded in setting the finding. Second, within the unit of payment category for which the prevailing wage is set, either summary statistic—mode or median—is more representative if it reflects less variation among the rates. Any summary statistic of the prevailing wage represents a distribution of wages with a typical or average wage; however, a summary statistic is a more satisfactory representation of the typical wage if most wages approximate the typical wage. (The variation in wages is inherent in the situation and thus is not a rectifiable problem.)

As shown in table 2.6, some findings were more satisfactory representations of the typical wage than others. For 6 of the 24 findings, the wages of only 62 percent or less of the workers were included in setting the findings; in one case only 25 percent were included. (See the last column in the table.) These low percentages reflect the fact that only the wages of workers in the largest unit of payment were included. Some of the prevailing wages are less satisfactory representations of the typical wage because of the inherently greater diversity of wage rates occurring in some crop activities. For the Connecticut apples survey, the decile range was $3.40 to $6.00 per hour, which means that the higher end of this wage range exceeds the lower end by 76 percent.[2] For 15 of the 24 wage findings, the higher end of the decile range was 25 percent or more higher than the lower end; for 5 findings, it was more than 60 percent higher. (These calculations exclude bonuses and other than the largest unit of payment, which may add variation.)

[2]The decile range can provide a measure of the variation in wages. It designates the wages of the 80 percent of the workers whose base wage rates are above the 10 percent of workers with the lowest rates and below the 10 percent of workers with the highest rates. The advantage of the decile range over simply a range as a summary of variation is that it is less affected by a few extreme values.

Table 2.6: Variation Around the Prevailing Wage and Representation of Workers

State	Crop	Decile range[a]	Percent paid in prevailing unit of pay[b]
Connecticut	Tobacco		
	Adult field	$4.00-4.50/hr	100
	Adult shed	4.00-4.73/hr	100
Connecticut[c]	Apples	3.40-6.00/hr	87
Idaho	Irrigation	3.00-3.50/line	25
Maine[d]	Apples		
	Strip pick	0.40-0.65/box	62
	Spot pick	4.00-4.51/hr	34
Montana[c]	Irrigation		
	Sprinkler	500-800/mo	100
	Flood	500-950/mo	100
Nevada	Irrigation	2.03-3.35/hr	100
New Hampshire	Apples	0.50-0.55/bushel	46
Oregon	Pears		
	Bartlett	9.50-12.00/bin	100
	Bosc	10.00-12.00/bin	97[d]
	Apples		
	Golden	8.00-10.00/bin	100[d]
	Red	10.00-10.00/bin	100[d]
	Strawberries	0.12-0.15/lb	87[d]
	Raspberries		
	Cannery	0.14-0.18/lb	97
	Fresh market	0.20-0.27/lb	50
Virginia	Cabbage	4.00-4.98/hr	100
	Apples		
	Marion Galax	0.40-0.50/bushel	90
	Roanoke	0.40-0.60/bushel	57
	Winchester	0.42-0.45/box	87
Washington	Apples		
	North central	8.50-10.00/bin	97
	South central	8.00-10.00/bin	98
West Virginia[c]	Apples	0.38-0.50/2,419 cu. in.	98

[a]Calculated on base rates excluding possible bonuses.

[b]Ratio of the number of workers paid in units of pay in which prevailing wage is set to the total number of workers in the survey.

[c]Based on 1986 season data.

[d]Wage findings set for more than unit of payment.

Data Source: Domestic Agricultural In-Season Wage Reports, 1987.

One way to reduce the percentage of workers excluded from calculation is to set findings for more than one unit of payment. Oregon was the single state that adopted this procedure for its four crop surveys, and the percentage of workers excluded from the calculations in those surveys is lower as a result. While this procedure allows the wages of

more workers to be considered in developing findings, the meaningfulness of the finding is lessened if few workers are paid in a given unit of payment. For instance, several Oregon findings were each based on the wages of merely six workers. This procedure deviates from handbook guidelines, but ETA national headquarters has sometimes exercised an administrative option of a schedule-of-rates approach that sets separate rates for each type of payment that includes at least five percent of the workers represented in the survey.

A second method of reducing the number of workers excluded when calculating the prevailing wage for a crop activity is, whenever possible, to convert units of payment to a single base. For example, surveys on apple picking may report payments by the one bushel box and the 1 1/8 bushel box. Both units of payment could be converted to a common base (for example, the bushel) for calculating the prevailing wage, and thus workers paid according to both units of payment could be weighed in the wage finding.

Stability of the Wage Findings

The variation in units of payment and wage rates can affect the stability of the finding. Under circumstances of relatively few eligible domestic workers, a few large employers, and relatively large differences in wage rates, the estimates can be unstable because the participation decision of a single employer can substantially alter the level of the prevailing wage. This potential problem of small sample size and participation can occur regardless of the specific rules of calculation. Nevertheless, the problem is exacerbated by the rule of considering only the most common unit of payment, which may severely diminish the effective sample. Under these circumstances (and possibly others), the measure may be stabilized by the common unit of payment and rate set by several H-2A growers as a result of DOL's minimum wage requirements. This instability is not traceable through the Domestic Agricultural In-Season Wage Report because it does not indicate the number of workers represented by different employers, nor whether the employers hire H-2A workers. However, state employees in charge of the surveys in New Hampshire and Maine described how this instability or stability underlay their reports.

In the 1987 New Hampshire apple survey, 3 non-H-2A growers employing U.S. workers represented only 36 out of 56 U.S. workers in the survey. (The two largest growers primarily relied on interstate workers but did not get these workers through the state employment agency and an

interstate clearance order.) The survey identified three units of payment—per bushel, per box, and per hour—with, respectively, 26, 18, and 12 workers paid in these units. The largest category was comprised of 26 workers paid by the bushel. Within this category, a single grower who hired 19 pickers during the survey week would, by the 40 percent rule, have set the prevailing wage for the next year.

Cooperation or noncooperation of this single employer can strongly affect the prevailing wage. If this single employer had refused to participate in the 1987 survey and other cooperation remained unchanged, then the prevailing wage would not have been $.50 per bushel. Indeed, it would have been set by another payment unit, at $.65 per Eastern Apple Box (1/8 bushel). This rate, equivalent to $.58 per bushel, would be 16 percent higher and again would be set by the wages paid by only a single employer using only domestic workers. If both of these growers had refused to participate, then the prevailing wage would have been set in another payment unit, at $5.18 per hour. This rate, which is not comparable to the piece rates without a productivity factor, would not have been set by a single employer. Rather, this hourly rate was offered by four to five H-2A growers who each hired few domestic workers but who all offered the required minimum of AEWR.

Although analysis of the New Hampshire survey illustrates the circumstances leading to an unstable measure of the prevailing wage, it also suggests that the measure could be stabilized, perhaps inappropriately, by the impact of DOL minimum wage regulations. This result is more concretely illustrated by the 1986 survey of spot picking of Maine apples. Under DOL rules of calculation, H-2A growers would have set the prevailing rate because (1) they tended to pay the same unit of payment and base rate (the prescribed minimum hourly rate of AEWR) and composed 40 percent of a payment category, and (2) their payment category was likely to be the largest because they were more likely to participate in the survey. (All H-2A growers participated in the 1987 survey, but only 40 percent of non-H-2A growers participated.)

Thus, under certain situations, the prevailing wage among H-2A growers could circularly determine the prevailing wage minimum among H-2A growers. In the case of Maine, the AEWR set for the season could potentially become the base rate for the prevailing wage minimum for the following season. However, the state's prevailing rate finding exceeded AEWR for the 1987 season because of bonuses, and its base hourly rate would still have to exceed the AEWR set for the next season to be the effective minimum. The point remains that a finding can be narrowly set

by the wages paid by H-2A growers, a wage rate that can be partially stabilized by DOL regulations.

Given that the instability of the estimate is inherent in the survey situation under these circumstances, ETA sometimes responds to this problem by changing the calculation rules. An ETA official told us that ETA may exercise administrative options to revise findings for such reasons as inadequate sample size. If the sample is too small, ETA may set the finding to the previous year's rate or to the finding in an adjoining state. For spot picking Maine apples in 1986, ETA revised the prevailing wage finding to another unit of payment by constructing a new largest payment category by converting two units of payment to a single base. The predominant influence of the H-2A growers was thereby administratively removed.

While these options are technically reasonable ways to stabilize estimates, they represent relatively ad hoc responses to inherent instability in some survey situations. Another possible response would be to set no prevailing wage. The New Hampshire employment service, for example, has submitted "no finding" to ETA for the 1986 and 1987 seasons, claiming their sample is too small and unrepresentative, but at least in 1986 ETA set a prevailing wage. While any of these options is reasonable, none of them fully resolves the inherent instability in the data.

The Relevance of the Surveys to Wage Protections

Even if the USDA survey and DOL-sponsored surveys were well-designed and implemented and the underlying wage systems were relatively uniform, DOL's use of the surveys might not adequately prevent adverse effects on the wages of U.S. agricultural workers employed similarly to H-2A workers. The adequacy of the protections rests on at least three issues involving the relevance of the current protections. First, how are the wage minimums derived from the surveys relevant to the wages of U.S. workers employed similarly to H-2A workers? Second, do the wage minimums derived from the surveys protect the wages of U.S. workers from past or future wage depression resulting from the employment of alien labor? Third, what protections do current rules afford U.S. workers relative to a range of definitions of adverse effect? Although fully resolving these broader issues involving nontechnical considerations is beyond the scope of our work, our examination of these issues places our technical assessment of the surveys in a more understandable perspective. Our observations on these issues, which will be discussed below, are summarized in table 2.7.

Table 2.7: Observations About the Relevance of the Surveys to Wage Protections

Relevance issue	Observation
Representation of domestic workers in same occupations as H-2A workers	The USDA Survey is not designed to represent domestic workers in only those occupations held by H-2A workers; the USDA category of field and livestock workers may underrepresent workers seasonally or more temporarily employed; the USDA wage estimate for this category may underestimate the average wage of domestic workers in the same occupations as H-2A workers.
	The target population of the prevailing wage survey is U.S. workers employed in the same seasonal or temporary jobs as H-2A workers.
Wage depression	Technical constraints severely restrict the precise measurement of wage depression.
	Given technical constraints, a proxy for precise measurement is necessary for routine administration of wage protections.
	The extent to which AEWRs compensate for past wage depression is uncertain, but AEWRs as wage minimums can alleviate one indication of wage depression.
	As with past wage depression, the extent to which AEWRs protect against future wage depression due to the importation of H-2A workers is uncertain, but AEWRs as wage minimums can alleviate one indication of wage depression.
Possible meanings of adverse effect	Adverse effect, including its measurement, is not defined by statute; the meaning given by DOL regulations can be clarified relative to several possible meanings.
Maintenance of the status quo	The prevailing wage minimum maintains the status quo of the previous season but can be affected by wage depression and thus stagnate over time.
Wage depression	AEWRs do not precisely compensate for wage depression but do mitigate wage stagnation or depression in a crop activity relative to a general farm wage, a wage pattern which has been interpreted as indicating wage depression due to the employment of foreign workers in the crop activity; since AEWRs are currently indexed on wages apparently lower than the average for seasonal and temporary workers, they can allow some stagnation of prevailing wages.
Normal adjustments to labor shortages	DOL's role appears preventive rather than directive; wage minimums do prevent wage stagnation relative to AEWRs but are not designed to adjust the various factors related to shortages of U.S. labor in agriculture.

Relevance to U.S. Workers in Same Crop Activities as H-2A Workers

Since each of the types of survey estimates the wages of a different population, the question arises as to why the estimated wages of these populations are appropriate to set a minimum wage. The relevance of these estimated wages involves many considerations, including the extent to which the target populations represent domestic workers similarly employed to H-2A workers. The meaning of "similarly employed" is

the requirements of IRCA. Clearly, a population could be more or less "similarly employed"; for example, all paid nonsupervisory agricultural workers could arguably be considered "similarly employed," although many of these workers would not be in exactly the same positions as those held by H-2A workers. Our purpose is not to define this phrase but to clarify the surveyed populations relative to the specific crop activities in which H-2A workers are employed and the implications of using these populations for setting wage minimums.

The USDA Survey: AEWRs

Since DOL has adapted the USDA survey for its own purposes, the extent to which the USDA estimate of the wages of field and livestock workers represents the wages of U.S. workers employed in the same occupations as H-2A workers is obscure. (DOL June 1987 regulations describe the USDA estimates of average hourly wages as an adequate minimum wage for protections under the H-2A program, but do not detail the relation between these average "wages in agriculture" and those of U.S. workers in the same occupations as H-2A workers.) The category of field and livestock workers includes U.S. workers in the same occupations as H-2A workers. However, the USDA sample probably systematically underrepresents them, and the USDA estimates likely underestimate their wages. In addition, the field and livestock workers represented in the survey could include undocumented workers and H-2A workers.

The USDA survey, which was not designed to estimate seasonal and temporary workers, may underrepresent them for several reasons. Since this quarterly survey is conducted on set dates, it may miss peak periods of seasonal and temporary employment. DOL monthly estimates indicate that agricultural employment is strongly seasonal, ranging from a February low of 239,000 to a June high of 516,000 in 1985. These same estimates suggest that the July and October USDA surveys would count about 70,000 to 100,000 fewer workers than were employed in the respectively preceding months. Also, weather at the time of the survey may limit crop activities and thus decrease seasonal and temporary employment. Moreover, the category of field and livestock workers excludes agricultural service workers, who may do seasonal and temporary labor but are paid through a contracted crew leader. Finally, since the annual regional wage estimates used for AEWRs are based on an average weighted by hours, the wages of more stably employed workers are likely weighted more heavily than those of more temporary workers because of a greater likelihood of the former being enumerated in successive surveys.

The USDA estimates of the wages for field and livestock workers may underestimate the wages of U.S. workers in the same occupations as H-2A workers. Although the lack of USDA estimates strictly for U.S. workers in the same occupations as H-2A workers makes exact comparisons impossible, two lines of evidence suggest (but do not prove) that those workers earn a higher average hourly wage. First, some experts suggest that seasonal and temporary occupations in which H-2A workers are employed tend to be paid according to piece rates. For 1985, 1986, and 1987, the USDA's annual national estimate of hourly earnings for piece rate workers was respectively $1.04, $0.81, and $1.24 an hour higher than those for field and livestock workers. However, this comparison may somewhat overestimate the difference for U.S. workers in the same occupations as H-2A workers because some of these U.S. workers are likely paid by hourly rates. Second, in California and Florida, the only states for which data are available, agricultural service workers earn higher hourly wage rates than field and livestock workers. We note that the amount of underestimation related to agricultural service workers could be small. For example, differences are quite small in Florida for recent surveys (see table I.2 in appendix I), and an unknown part of the wage differential results from the inclusion of highly skilled workers in agricultural services whose work is not similar to that of H-2A workers.

DOL describes AEWRs under current methods of calculation as a wage floor to prevent adverse wage impacts but does not explain why the level of a general farm wage as a minimum wage provides this protection. Since the average general farm wage used to set AEWRs appears to underestimate the average wages of domestic workers in the same occupations as H-2A workers, AEWRs based on regional average wages of a population more representative of workers in the same occupations as H-2A workers would likely be a higher rate than that calculated under current DOL regulations. Which level of a minimum wage is appropriate depends upon several considerations—including using an average wage as a minimum, using a single minimum for various occupations with different levels of prevailing wages, and the ability to measure adverse effects. However, although setting the level of AEWRs to the USDA estimates has unclear justification in terms of the representativeness of the survey population, using these USDA estimates as a wage index may be justifiable for other reasons than precise representativeness (as will be discussed in the section on wage depression).

The Prevailing Wage Survey

With regard to the prevailing wage surveys, since these are specifically designed for DOL's purposes, the target population is U.S. workers

employed in the same tasks as H-2A workers. The U.S. workers represented in the survey should be employed in the same crop, the same crop activity, and the same locality as those in which H-2A workers are employed or anticipated. By current DOL regulations, the category of U.S. workers includes aliens legalized or eligible for legalization under the special agricultural worker (SAW) provisions of IRCA. In practice, some of the surveys examined above likely included undocumented aliens of unknown eligibility for the SAW program. Within the limitations of the surveys and the complexity of the wage systems, the prevailing wage surveys estimate the typical wages of U.S. workers employed similarly to H-2A workers for particular crop activities in a locale.[1]

Wage Depression

Controversy over DOL's new methodology for calculating AEWRs, effective as of its Interim Final Rule[2] of June 1987, has raised the issue of whether wage minimums based directly on survey estimates adequately protect U.S. workers' wages from wage depression. Wage depression occurs when the actual wages of U.S. workers are lower than would have existed if foreign workers had not been added to the labor supply. (According to economic theory, the introduction of additional workers into an otherwise unchanged labor market will lower wages or displace workers, or both. Whether the additional workers will in fact lower wages or displace workers depends on the net effect of all relevant factors affecting the actual situation.) DOL has differentiated two types of wage depression. Past wage depression is the cumulative depressive effect on U.S. workers' wages from past competition with foreign workers. Future wage depression is the prospective depressive effect attributable to allowing the importation of H-2A workers in the future.

[1]While the task may be similar, other factors associated with wage levels may differ. Evidence from state officials (as previously noted) indicates that the prevailing wage rates can reflect labor market differences in terms of part-time or full-time employment, operation size, cost structure, and regulations. U.S. workers may be employed in similar tasks by employers of H-2A workers, who must pay their U.S. workers the same regulated rate as their H-2A workers receive. Alternatively, smaller operations may hire part-time local U.S. workers and pay higher rates (because of lower overhead) than those typically paid by H-2A growers. Other larger operations with similar cost structures to those of the H-2A growers may hire U.S. migrant workers at wages that reflect other tradeoffs between wages and perquisites than those required of H-2A growers.

[2]The Immigration and Nationality Act of 1952 (INA) authorizing the H-2A program was amended by the Immigration Reform and Control Act of 1986 (IRCA). IRCA raised to a statutory level the previously regulatory standard of denying the importation of H-2A workers if their employment would "adversely affect" the wages of similarly employed U.S. workers. DOL's regulations governing the H-2A program under IRCA were published June 1, 1987, affecting all applications for certification filed after that date.

The requirement to address past wage depression is not specifically mandated by statute. IRCA raised to a statutory level DOL's prior regulatory standard concerning the prevention of adverse wage effects due to the employment of temporary foreign workers. However, IRCA (like the Immigration and Nationality Act of 1952 to which IRCA is an amendment) does not define adverse effect or its measurement.

Since 1968—excepting some interim methods—DOL had indexed the AEWRs (the base figures derived by methods used prior to 1968) to the percentage of increase in the annual average wage rates for field and livestock workers between the preceding two years. DOL's new methodology (under its regulations of June 1987) sets AEWRs equal to the annual average wage rates for field and livestock workers for the previous year. This change retained the indexing of the AEWRs to the USDA estimates but changed the base rates to the estimates themselves.

DOL had justified its past method for determining AEWRs as compensation for past wage depression, particularly that due to the impact of undocumented aliens, and continues in its June 1987 rule to cite AEWRs as a method to avoid wage deflation. However, its previous method tended to produce AEWRs above the average wages for field and livestock workers. The June 1987 rule sets AEWRs equal to the annual average wages for field and livestock workers, but critics have argued that DOL should continue its former policy of offsetting past wage depression through enhanced AEWRs (that is, above the average wages for field and livestock workers). On the other hand, DOL has argued that IRCA supports its current decision to not compensate for past wage depression. The U.S. Court of Appeals, in December 1987, rejected DOL's argument that the wording in IRCA contemplates only future wage depression.[1] The court did grant that DOL had the discretion to change its past policies if it could provide a reasonable explanation for the change in light of its statutory mandate to protect American workers from adverse effects.

Although we provide no judgment on whether past depression should or should not be compensated, we make four observations about the relevance of DOL's Interim Final Rule of June 1987 to wage depression.

First, we observe that neither past nor future wage depression can be precisely measured, due to technical constraints. Ideally, DOL would compensate for adverse effect based on a precise measure of wage depression in crops in which H-2A workers are involved, but the requirements

[1]See American Fed. of Labor and Congress of Indus. Org. v. Brock, 835 F.2d 912 (D.C. Cir. 1987).

for precise measurement are so demanding that they would probably be technically and administratively infeasible to apply to many crop activities.[1] More specifically, because of the long-term availability of either H-2A or undocumented foreign workers in most crop activities, it is hard to find strong contrasts of U.S. workers' wages with and without the influence of alien penetration. For those comparison cases available, it is problematic to generalize precise measures of wage depression to other labor markets even in the same crop at another time. Many other human-capital factors that could explain the differences in wages between the comparison groups—such as education, skills, age, and experience—would have to be taken into account. Likewise, contextual factors that could affect wages but are different between the comparison groups would have to be measured and their effects statistically removed. In addition, to do a thorough study one would need to track all labor cost factors, such as tools, housing, workers' compensation, unemployment insurance, and supervision. Also, since wage depression may be different for different time periods, the measurement would have to be an ongoing effort.

Second, given the technical constraints on a precise measure of wage depression, proxies to precise measurement are necessary to administer wage protections. The average annual wages of field and livestock workers seem to be DOL's proxy for a precise measure of the wages that would have occurred without the presence of foreign workers in the labor force. The same rationale underlies DOL's 1986 rejection of using prevailing wages as the standard for AEWRs; that is, AEWRs are designed to offset depression of prevailing wages brought about by the presence of alien workers.

Third, we observe that the extent to which the AEWRs set under the current Interim Final Rule (or enhanced AEWRs under prior methods) compensate for past wage depression is uncertain, but that an indicator of wage depression can be selected on a rational basis. Lacking a precise measure of wage depression, we cannot be sure at what level the minimum wage under or overcompensates for past wage depression. The choice of AEWR standards, then, may be justified on logical and empirical grounds, but the exact level set retains an arbitrary element. The use of general farm wages as a basis for AEWRs has a logical and empirical basis in that the stagnation of prevailing wages relative to general farm wages

[1]See Illegal Aliens: Influence of Illegal Workers on Wages and Working Conditions of Legal Workers (GAO/PEMD-88-13BR, Mar. 10, 1988), pages 10-11 and 19-27, for a discussion of the technical weakness that can limit conclusions from research on wage depression.

has been cited as an indicator of wage depression. If prevailing wages are indexed to general farm wages, at least this indication of wage depression is alleviated. Note that to the extent that general farm wages are also depressed—the penetration of undocumented and H-2A workers in the USDA sample is unknown—or are weakly associated with factors influencing the wages of seasonal workers, general farm wages would be a less useful indicator of a nondepressed wage among seasonal workers. (The current controversy has been primarily focused on the base rates rather than the use of USDA estimates as an index.)

Fourth, we likewise observe that whether the present AEWRs methodology protects against future wage depression (resulting from allowing H-2A workers to be employed in the next season) is uncertain, even if no undocumented aliens were present in the sample population. The proposition that H-2A workers cannot cause future wage depression because they must be paid at least the AEWR or prevailing wage from the previous season assumes that these wage protections assure a wage for the current season as high as would have existed if no H-2A workers were available. Again, without a precise measure of wage depression, we cannot assess how well DOL's wage minimums compensate for future wage depression due to the importation of H-2A workers. Moreover, DOL's wage minimums are not designed to be a wage that would attract sufficient U.S. workers to meet growers' needs if no H-2A workers were available for the following season. Thus, the nature of DOL's wage protections cannot be closely tied to the concept of wage depression but, as we shall see in the next section, can be clarified relative to several possible meanings of adverse effect.

The Meaning of Adverse Effect

The adequacy of DOL's efforts to prevent adverse effects based on wage surveys depends on the meaning of adverse effect as well as on the technical adequacy of the data. As previously noted, neither the meaning of "adverse affect" nor a method for its measurement is defined by statute. Various definitions of adverse effects on wages are possible, each citing different criteria as evidence of adverse effects and attendant technical problems as well as possible administrative obligations. For example:

1. Adverse effect might refer to lowering wages that already exist in the area, suggesting an administrative obligation to assure no worsening of the status quo.

2. Adverse effect might also mean preventing wages from reaching the point that would have occurred if foreign labor had not been available

to work in the crop. Under this definition, for example, even if wages rose after foreign labor entered, wage depression could have occurred if wages would have risen even higher without the presence of the alien workers. This definition suggests an administrative obligation to adjust wages to remove wage depression.

3. Adverse effect might mean unduly inhibiting responses to the labor shortages other than importing foreign workers. Although foreign labor could be used to lessen and slow down other possible responses to labor shortages—such as the adjustments of wages, conditions of work, methods of agriculture, or a decline in production—for the sake of a more orderly and less destructive adjustment by agricultural employers, any halt in the gradual adjustment to shortages of U.S. labor would be considered an adverse effect. Where corrective tendencies are halted—as evidenced by declining wage rates, increased reliance on foreign labor, displacement of U.S. workers, reluctant recruitment efforts, failure to improve housing and working conditions, among other factors—then the administrative obligation might be to "fine tune" the H-2A program to restore gradual adjustments.

The first definition of adverse effect—maintaining the status quo—is probably the easiest to deal with technically and administratively. For example, the prevailing wage survey could maintain the status quo by preserving the wage levels of the previous season. However, since the prevailing wage does not necessarily provide relief from wage depression due to the employment of alien workers, wages may stagnate over time.

The second definition of adverse effect rests on a concept of wage depression. As already noted, studies to precisely measure wage depression for specific crop activities would not likely be technically and administratively feasible as a routine and ongoing methodology covering many crops. The less precise but more technically and administratively feasible option is to index minimum wages to broader groups presumably more reflective of wage level and trends that would have occurred in the crop activity had no foreign workers been employed. The issue then becomes the selection of the indicator that best approximates the nondepressed wages.

AEWRs appear to serve as an proxy for nondepressed wages in DOL's wage protections and specifically mitigate one indication of wage depression—that is, the stagnation of prevailing wages relative to the level of general farm wages. The general limitation to this approach is

that, lacking a precise measure of wage depression, the appropriateness of any particular indicator can remain controversial. For selecting the best indicator of a non-depressed wage, the appropriate balance between the criteria of more representativeness (perhaps by simply including field workers or piece rate workers in the survey population) and less likelihood of wage depression due to foreign workers (perhaps by expanding the survey to include manufacturing workers) is likely to be elusive. (DOL has broad discretion under its statutory mandate to set AEWRs by any of a number of reasonable methodologies.) With regard to a current limitation, since AEWRs are based on general farm wages that are apparently lower than the average wage for seasonal and temporary workers, the AEWRs as wage minimums could allow some stagnation of seasonal workers' wages in some crops before having a beneficial effect.

The third definition of adverse effect provides the most inclusive approach, by treating wages as part of the labor market, but it would be the most administratively and technically complex. First, the indicators of arrested adjustments to labor shortages would doubtless be technically controversial. For example, might declining wage rates be due to alien workers or other market forces, and what would be the standard to identify declining wages? Similarly, if few U.S. workers are recruited, is reluctant recruitment the cause or effect of this situation? Second, in light of technical difficulties in precisely identifying interrupted adjustments, what would be the guiding concept of targeted goals for DOL's adjustments? For example, should DOL's regulations on the H-2A program be based on trying to reduce alien labor to a minimum by encouraging higher wages or changing to production methods more attractive to U.S. workers?

Moreover, DOL may be constrained from adopting the third definition of adverse effect and thus administering the program toward a gradual termination of reliance on foreign labor. Courts have ruled that DOL must balance the prevention of adverse effects with the growers' legitimate needs for sufficient seasonal labor. DOL has stated that the role of minimum wages is not to set an attractive wage, implying that the regulated minimum wages are not designed to draw U.S. workers to agricultural jobs. Thus, while wage minimums do prevent wage stagnation relative to AEWRs, they are not designed to directly affect the various factors related to shortages of U.S. workers in agriculture.

In summary, three issues arise concerning the ability of the USDA and prevailing wage surveys to protect the wages of U.S. workers. Our

observations do not fully resolve these issues, but do place them in perspective. First, whereas the prevailing wage survey provides a minimum wage that is designed to measure an average wage for U.S. workers in the same occupation as the H-2A workers, the UDSA survey provides a minimum wage that is an average of a general farm wage. Second, the minimum wage from neither survey precisely compensates for possible wage depression. However, the minimum wage based on the USDA survey is designed to compensate in some manner for wage depression that may affect the level of prevailing wages. Third, DOL's current regulations appear to prevent wage stagnation relative to a general farm wage, but are not designed to diminish the need for foreign labor in U.S. agriculture.

Summary and Conclusions

Our technical assessment of the two types of survey has identified potential errors in each that may affect the wage estimates used to set minimum wages. Each of the types of survey could be improved to better assure the reliability of its wage estimates. However, the appropriateness of the use of surveys to set wage minimums is not strictly a technical issue. In the absence of a precise measure of wage depression, the setting of wage minimums involves considerations about adverse effects that may be rationally justified but that may necessarily involve an element of judgment.

The broader issue of the relevance of the surveys to wage protections does not diminish the importance of reliable estimates. To be a useful basis for a minimum wage, an estimate should reliably represent the true wage of the target population of workers. A markedly unreliable estimate would be unfair to the interests of either workers or growers, and the randomness of such an estimate creates an uncertainty in setting wage minimums that is unfair to both workers and growers.

For the purpose of setting the Adverse Effect Wage Rates (AEWRS), the USDA survey—although generally conforming to accepted survey practices—provides estimates of largely unexamined precision, which have a more questionable reliability for some regions of the country than for others. The prevailing wage surveys vary considerably in procedures and quality, perhaps due to DOL's minimal oversight and the lack of adequate quality control (such as meaningful measures of response rates). Some procedures or quality indicators—such as low response rates, the differing levels of cooperation of different types of growers, lack of interviewer training, and errors in analysis—indicate that some of the surveys were of low quality. But, we also note that the complexity of

wage systems for some crop activities and unusual circumstances (such as few employers) can make setting an adequate prevailing wage inherently difficult.

A direct comparison of the quality of the two types of survey is rendered difficult by the wide variation in the prevailing wage surveys. The USDA survey does appear to be a higher quality survey than many of the prevailing wage surveys. For example, the high response rate of the USDA survey is approximated or exceeded by about 44 percent of the examined prevailing wage surveys, but the response rates for the other prevailing wage surveys suggest a lesser quality than the USDA survey.

The lesser quality of some prevailing wage surveys may in part reflect the different objectives and specifications of the two types of surveys. Whereas the USDA survey includes many occupations in a nationwide area with all wage methods converted to a single base, a prevailing wage survey focuses on a narrowly defined crop activity in a narrower locale. When the prevailing wage surveys are conducted under circumstances of marked diversity in methods of payment and bonuses as well as relatively small sample size, the estimates tend to become dependent upon the participation of a few employers.

The two types of survey then make different tradeoffs between the representativeness and reliability of wage estimates. The USDA survey is designed to make a relatively reliable estimate of a general farm wage in a region, but this estimate is unlikely to accurately represent the wages for each of the various farm occupations and locales. On the other hand, the prevailing wage survey represents particular crop activities in a particular area, but its focus on a more narrowly defined population can lead to less reliable estimates under some circumstances.

Even if the surveys used to set minimum wages were well designed and implemented, the relevance of the survey data for wage protections involves broader issues. The USDA survey estimates an average agricultural wage for many crops and activities, whereas the prevailing wage rate surveys are specifically designed to estimate the wages of U.S. workers employed in the same crops, activities, and locales as H-2A workers. Neither survey is designed to precisely measure wage depression, but the USDA estimates for AEWRs are intended to prevent stagnation of prevailing wages relative to general farm wages, a stagnation which

might indicate wage depression due to the employment of foreign workers. Lacking a precise measurement of wage depression, DOL's regulations on wage protections necessarily include a judgmental component in choosing among reasonable methodologies to prevent adverse effects.

Our recommendations are tempered by a recognition of the technical difficulties surrounding surveys of agricultural wages as well as the relatively small size of the current H-2A program. Variations of crop conditions within reporting areas over a single or several seasons, the diversity of wage rates and bonus systems, the technical difficulties of measuring wage depression are not issues that are easily solved. Nevertheless, while some of the problems with the survey to set AEWRs and the prevailing wage surveys are probably intractable, other problems can be alleviated with relatively little additional resources. Other needed steps, such as possibly increasing sample sizes for some regions in the USDA survey, may be more costly, but until additional information is available—such as more reliable response rates for the prevailing wage surveys and sampling errors for the annual average wage for field and livestock workers—it is not possible to estimate the cost of needed changes.

Recommendations to the Secretary of Labor

To ensure that the wage minimums set by DOL to protect U.S. workers from the adverse effects of the H-2A program are reasonably accurate, we recommend that DOL

- negotiate with USDA to provide routine analysis of error margins surrounding the wage estimates on which statewide minimum hourly wage rates are based and improve the survey as necessary (which may require increased sample sizes in at least some regions) to maintain reasonably small margins of error around such estimates;
- provide greater oversight and guidance to the state agencies conducting the prevailing wage surveys, including revising the survey handbook and forms to improve consistency of procedures and ability to monitor quality of implementation; and lastly
- consider converting units of payment to a common base to ensure that prevailing wage findings are calculated on the largest possible number of workers surveyed.

The following are more specific recommendations for the improvement of the prevailing wage surveys:

- Since the handbook directs interviewers to verify employer-supplied information with employee-supplied data, it should provide guidance on handling discrepancies.
- The interview records should be revised or supplemented. The present cells for average hourly earnings based on combining information from several interviewed workers should be removed unless required for other than verification of employer data. For verification of employer data, the interview records should be supplemented with forms that record individual wage information from workers and any calculations performed by the interviewer.
- The survey summary form should be revised to better alert ETA regional and national offices of problems that reduce the quality of the survey. The form should routinely require information to allow routine calculation of a growers' response rate and worker coverage.
- If problems affecting quality appear for particular surveys, ETA should confer with the state officials about the problems and, if necessary, provide or facilitate training or technical aid. (Such training might include techniques for gaining better cooperation from growers in the survey as a means to reduce response bias.)
- Particularly because of the attractiveness of mail surveys as a means of limiting expenses, ETA should be especially watchful that such surveys are adequate and, if they are not, provide guidance on ways to increase response rates or, alternatively, require other methods of data collection.

Recruitment Protections for U.S. Workers: The Case of Virginia Tobacco

The second major set of protections for U.S. workers includes rules about recruitment that require a test of the supply of domestic workers before growers are allowed to import foreign workers and rules that govern some conditions of work after their hiring. At issue is whether these protections are effective. This can best be addressed by evaluating a particular crop and region, considering the prevailing agricultural technology, crop price, organization of work, wages, and other factors. Therefore, we did a case study of part of the Virginia tobacco industry in 1987 where H-2A workers were employed. We examined the following two questions:

- What labor was needed?
- Did DOL appropriately certify the need for foreign workers?

Our initial findings made it necessary to examine a third question: What could explain the apparently long-standing shortage of U.S. workers?

This chapter gives the results of our review of the 1987 labor supply in the case study area (tobacco counties of the Virginia Piedmont). The broader context for understanding the events of that year is provided in appendix II, including information on the tobacco industry in the region and the history of different sources of labor that have been used.

Growers' Labor Demand in the Case Study Area

In a southern Virginia county, 26 tobacco growers, acting through an association, asked DOL to certify about 240 foreign workers for the 1987 season. Groups of growers submitted their job orders to the state employment service at different times between January and April, requesting workers to start on dates from April through July. The orders followed a format used repeatedly in past years, stating the need for workers to perform a series of specified tobacco cultivation and harvest tasks as well as a small amount of "general agricultural work." DOL eventually certified these requests almost exactly as originally presented and once again, as has happened for the last few years, several hundred young foreign workers brought in the season's crop of tobacco—far and away the most valuable crop (in cash receipts) in the entire state.[1]

[1]The Immigration and Nationality Act (INA) authorizing the H-2A program was amended by the Immigration Reform and Control Act of 1986, including for the first time a statutory requirement of "positive recruitment." DOL rules implementing this requirement were published June 1, 1987, affecting all applications for certification filed after that date. All the job orders in the case study area of our review were filed before the new rules.

Was the Need for Foreign Labor Appropriately Certified?

The recruitment process that precedes the certification of a shortage of U.S. tobacco workers tests the availability of U.S. workers. We evaluated the process in two ways. First, we looked to see if DOL had sound data on the results of the test, to accurately judge the success or (as in this case) the failure of recruitment. Second, we did our own tests of the supply of labor, by actually attempting to locate and interview potential employees, to reach our own conclusion about whether the certification accurately reflected the availability of U.S. labor for the tobacco growers' tasks.

The Required Recruitment and Its Outcomes

Employers are required to cooperate with the employment service "in the active recruitment" of U.S. workers, including advertisements and contacting various sources of labor both local and elsewhere. The details of the employer's requirements are outlined in the DOL's approval letter for the job orders submitted by the growers.

When the job orders were filed, an official in the local office of the state employment service began the recruitment efforts required by DOL regulations. He placed help-wanted advertisements on local radio, put up posters at stores and schools announcing the job vacancies, and sent postcards about the vacancies to about 300 people listed in an office file of those interested in farm work. However, this official reported that not one worker even showed interest as a result of these activities.

Individual growers did little recruiting. The grower association advertised in local newspapers. None of the growers we interviewed spoke of any other recruitment steps (other than casual searches among acquaintances) they had taken in 1987. They did nothing beyond the advertisements because they believed it was impossible to find any significant number of acceptable domestic workers for heavy field cultivation and harvest tasks.

DOL regional administrators expect recruitment reports at the end of the recruitment period from both the growers and state employment agencies. These reports, which list recruitment efforts and the outcome for each referred worker, can affect certification in two ways. First, DOL can deny certification if a grower fails to comply with recruitment or other requirements; no grower in the area we studied was denied eligibility for any reason in the year we reviewed. Second, for each domestic worker referred and successfully placed before the certification date, DOL subtracts one H-2A worker from the certificate of that grower. State officials informed DOL that only three of the five U.S. workers referred before the

certification date had been placed successfully; DOL reduced by three the number of foreign workers certified.

Employment service officials' efforts to recruit domestic workers throughout Virginia and in other states were also relatively unsuccessful. Four offices elsewhere in Virginia referred a total of 23 workers. Virginia officials also notified the employment services in other states about the job orders. Five accepted them for processing—Texas, Florida, Louisiana, Delaware, and West Virginia. As far as we could learn, only one of these states referred any workers and of this small number we found no record that any were hired. Other states rejected the orders, citing conflict with local labor demand or lack of local interest. The 1987 recruitment process eventually yielded a total of 33 U.S. workers referred to the growers, only a small fraction of the stated labor need.

Extent and Timing of DOL Information on U.S. Worker Availability

DOL needs good information to do its job of evaluating the degree of labor shortage and thus protecting U.S. workers, no matter how many individuals are recruited in any year. The agency granted approval for almost all the foreign workers originally requested by the Virginia growers. There was no question as to the general shortage; however, the protection afforded U.S. workers by DOL's procedures was weakened by two kinds of inadequacies in the information on which the decisions rested.

First, we found that DOL's information on the outcome of the referrals may not be a balanced account. In effect, DOL assumed that state officials provided an unbiased account of the results of the recruitment process. We question that assumption, at least for the period we reviewed in our case study location, because state officials will normally only obtain growers' accounts of the outcome of the referrals. Growers strongly prefer the foreign workers they are applying for (these views and their factual basis are discussed in detail below), so there is a motive for inaccurate reporting of the outcomes of recruitment of U.S. workers.

To test the accuracy of what DOL knew about the labor supply, we began with what the Virginia Employment Commission said about the U.S. workers recruited for them. The local employment offices provided information on 27 of the 33 U.S. workers referred in response to the tobacco job orders. The state reports on these individuals showed that the majority never showed up, refused the job, quit, or were fired for cause after a short period.

We then contacted the workers to compare their explanations with the employment service record, presumably drawn from contacts with the growers or the growers' association that proceed all the referrals. We were able to interview the individual worker or a close relative in 10 of the 27 cases. Seven of the 10, or 70 percent, disputed the growers' accounts we received from state officials, and 3 agreed with them.[2] Some disputed accounts involved large discrepancies, such as whether the worker even showed up in the first place, refused the job, or was given any work to do. Whether an individual was fired with just cause is a subjective determination and would be difficult to establish conclusively after the fact. Just as some growers have a motivation to criticize the U.S. workers, the workers who are no longer in jobs they were referred to also have motives for inaccurate reporting, to show that the outcome was not their fault. However, the firm opinions of these seven workers show there is at least some doubt about the limited information DOL received in this case.

A second difficulty with the effectiveness of the test of the supply of U.S. workers is that DOL decides how many foreign workers to certify for admission while the test is still running. The certification decision occurs 20 days before the stated date of need for the workers. DOL can reduce the number certified if it learns of U.S. workers placed before certification, but we found that 28 of the season's total of 33 workers referred, or 85 percent, came later than that—too late to affect the number certified. Regulations require growers with certified H-2A workers to give late-arriving but qualified and eligible U.S. workers (up to the midpoint of the foreign workers' term) a chance to work.

We found that DOL did not actively monitor the referral process after certification. The outcome of referrals after certification might come to DOL attention from employment service reports, workers' complaints (filed either with the employment service or the regional ETA office), or

[2]For the disputed cases, we cannot independently verify the account of either the worker or the grower. However, the workers' statements available to us suggest that accounts can considerably differ. Two, who had worked on a cabbage H-2A order before being referred to tobacco, said they quit because they were accused unfairly of lighting a fire in employer-provided housing and using drugs, and another worker we interviewed agreed with them that the accusation was untrue. One man said he was told by the employer that he had arrived too early but that the employer would call when work became available; he said the employer never called back. One said the employer fired him for working too slowly but that he believed his work was adequate. The father of a college student assigned to a tobacco farm said his son left because the living conditions were intolerable. Two experienced tobacco workers said they left a farm after being told to dig holes or move pipe, which they did not believe was the work they had been referred to do. One of these also said he worked five days and did all the tasks assigned to him but left after the farmer threatened him. A friend of this worker had seen the episodes and confirmed the worker's statement about harassment by the employer.

growers' requests for emergency recertification. We found that DOL was unaware of information on most outcomes held by the employment services. DOL did become aware of three outcomes because of an emergency order for additional foreign workers in response to a grower claim that three U.S. workers originally counted against his request for H-2As had quit. (DOL checked this claim with local employment officials; those officials told DOL that only two had left, so that was the additional number approved.) DOL received no information directly from workers because no tobacco workers filed a complaint in the year we studied.

Few Experienced, Willing U.S. Tobacco Workers

For a second test of the validity of DOL certification of a labor shortage, two of our interviewers did a small-scale independent check for U.S. workers. We did this first in the immediate area of southern Virginia where the tobacco growers in our case study were requesting foreign workers. We then checked in the adjoining tobacco-growing counties in North Carolina and also in the fruit and vegetable farming region of the Delmarva (Delaware-Maryland-Virginia) peninsula about 190 miles away. We knew that there were no H-2A foreign workers in either of these latter two areas, so we assumed that U.S. workers were the main farmworkers in both areas and we wanted to understand the differences in conditions that led to a ready U.S. labor supply. However, we were unsuccessful in all these places in locating any sizable concentration of available U.S. farmworkers.

For a full week in August, we searched for U.S. farmworkers in several counties in the tobacco growing area of southern Virginia, using most of the means suggested by the Department of Labor recruitment regulations. In several towns, local job training and employment service officials arranged for us to meet with current or past farmworkers. We searched extensively in communities in the case study region, armed with lists of potential workers, addresses of large housing projects, and contacts with knowledgeable community leaders, yet we could not find a significant pool of available workers. In that week's effort, we located a total of 25 U.S. workers, the majority of whom were either not interested in doing heavy field work or had little pertinent experience.

In North Carolina, in May, two of our interviewers spent nine hours going door to door, searching for individuals who had been identified as possibly interested in farm work. We found only two people in that time who expressed any interest in doing field work, and one of the two said he preferred barn (not field) work. State employment officials in North Carolina told us that while it was true no H-2A workers were employed in

the area, the tobacco work force was indeed foreign undocumented,[1] not U.S., workers. (Our discussion of "foreign workers" admitted through the H-2A program refers to H-2A workers, but the term "foreign workers" is also appropriately applied to undocumented workers.)

In the vegetable fields of Virginia's Delmarva peninsula, U.S. migrant workers do form a major part of the work force. However, in interviews with individual workers and with the crew leaders who move them from crop to crop, we again found little interest in jobs in tobacco. State employment service officials in other states told us that migrant workers in their area currently held similar negative views.

In summary, we concluded that there were shortcomings in the protection of U.S. workers in the recruitment process in the season we observed, especially when DOL accepted state officials' explanations of why those referred were not hired, which were based exclusively on growers' statements. However, only 33 workers were referred. Thus, even if all had been hired for the full season, growers' labor demands would not have been met. From our own observations in nearby areas, we also concluded that even with a more rigorous labor supply test in the season we observed, neither the growers nor the Virginia state employment service could have located enough U.S. workers to fill the jobs offered. Especially considering that in addition to the requests for 240 tobacco workers from the association we examined closely, a nearby association requested about 600 more tobacco workers, and requested 100 cabbage workers as well, the total of about 1,000 farmworkers the growers requested for the 1987 season in southern Virginia clearly could not have been supplied from readily available U.S. labor sources.

Since the 1987 season we studied, DOL has published new rules with additional recruitment steps. Employers will now be required to submit as part of the application a plan for independent positive recruitment of U.S. workers. The submitted plan must include assurances that the employer will recruit domestic workers at least to the same extent (with respect to effort and location) as do non-H-2A agricultural employers of comparable or smaller size in their locale. As will be discussed below, there may be sources of migrant U.S. workers that could be tapped by stronger recruitment methods. IRCA authorized a specific appropriation for recruitment of domestic workers for jobs that might otherwise be

[1]We did not attempt to determine the immigration status of these allegedly undocumented foreign workers since such a legal determination was beyond the scope of our review. Thus, we sought no evidence to make a determination whether these workers were authorized or eligible for legalization under the SAW program.

performed by H-2A workers and for monitoring compliance with the terms and conditions required under the H-2A program. ETA officials told us they could not identify any specific appropriation request for the purpose of recruiting domestic workers, nor any plans other than routine data gathering to evaluate the effectiveness of the new recruitment rules.

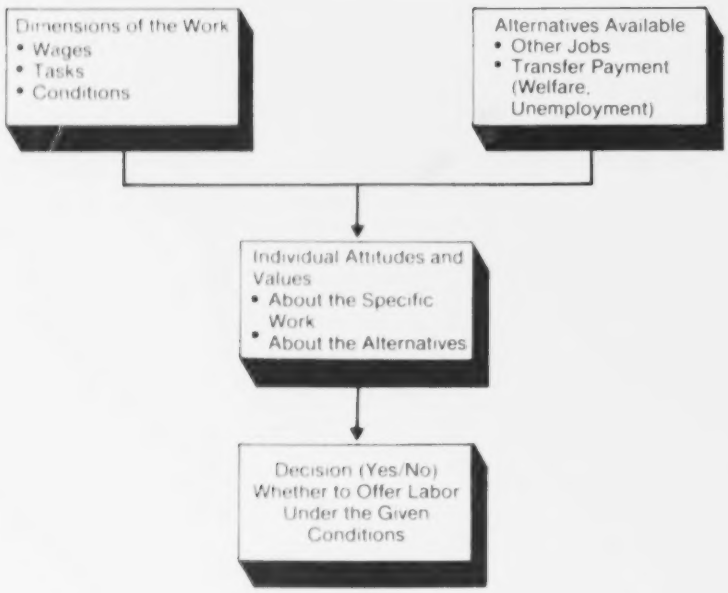
What Explains the Shortage of U.S. Farmworkers?

After observing the lack of U.S. workers and concluding that faulty recruitment was not a major cause, we searched for additional explanations. There can be many reasons for a shortage of labor in any particular situation. A simplified model of the determinants of labor supply is shown in figure 3.1. As the figure suggests, a supply of labor does not exist in the abstract; individuals decide to offer their services after weighing a specific job opportunity and the alternatives against personal attitudes about work, leisure, and valuations of the different elements of the situation. In our case study crop area, U.S. and foreign workers clearly evaluated the 1987 tobacco job opportunities very differently. This observation is not unique. The same result has been observed in other crop areas, and especially in the fruit and vegetable segments of U.S. agriculture, growers have generally come to depend on foreign workers for many harvest tasks. While we cannot determine the contribution of each causal factor in the figure even for our chosen case study area, the model guided our explorations as we looked for plausible explanations for the shortage of U.S. workers in the area. The factors we explored that might affect U.S. workers' decisions not to seek the tobacco jobs included: wages, working conditions, alternatives such as other jobs or welfare and unemployment, and attitudes toward the work.

Wages: Domestic Workers Are Sometimes Paid Less

Some U.S. workers could well be discouraged by the lower wages they sometimes receive, although our evidence is inconclusive. In Virginia, statements made by some growers and workers suggested some underpayment occurred, although we do not know how widespread this practice may be. The H-2A program rules require growers using foreign workers to pay at least the enhanced minimum wage called the adverse

Figure 3.1: Determinants of Individuals' Employment Decisions



effect wage rate ($4.98 in 1987) to U.S. and H-2A workers alike.[1] However, two growers told us that they hired many local day laborers and paid them $3.75 an hour, or slightly above the minimum wage. These growers told us local workers preferred to be paid in cash, and in the growers' opinion this was because the workers were receiving various benefit payments and did not want to risk having any written record that might be used somehow to lower their benefits. One family of U.S. workers told us that their work for an H-2A grower was paid at less than $4.00 an hour, rather than at the AEWR rate of $4.98. Several U.S. workers in the H-2A area complained that the foreign workers were paid more. The H-2A workers, of course, received free housing while few of the domestic workers enjoyed this benefit. DOL earlier found evidence of poor record-keeping and illegal underpayment of workers when they checked on tobacco growers in Virginia because of a pay dispute.

[1]According to a DOL official, a U.S. District Judge in Virginia has ruled that a U.S. worker doing any of the activities listed on the job order must be paid the rate offered H-2A workers. The job orders for foreign tobacco workers routinely listed all the tasks in tobacco culture, including barn work and other activities beyond field harvesting. Thus, virtually all the tobacco work force, U.S. and foreign, should have been paid at least AEWR.

However, interviews with some workers suggest that a salary less than AEWR but higher than the typical wages for day laborers would be acceptable for tobacco work, but it is unclear that they would be willing to do the heavier crop activities usually done by H-2A workers for this wage. In both the tobacco case study region and on the Delmarva peninsula, we collected information about the wages that U.S. workers wanted for doing tobacco work. We found that the wage rates described above for U.S. workers doing tobacco tasks (around $4.00 an hour) may be a large part of the problem. Of the 18 individuals who expressed a particular desired wage rate, four said that they wanted $5.00 an hour or more to work in tobacco, seven said $4.50 or more, and only one would have been satisfied with less than $4.00. (Some said they wouldn't work in tobacco at any wage.) Like any other task, tobacco work would be more attractive if higher wages were offered, though we cannot quantify the potential increase in supply at different hypothetical wages.

Harsh Working Conditions May Depress U.S. Labor Supply

The typical conditions of work in growing and harvesting tobacco are difficult, and some of the tasks themselves are disagreeable. The workers are isolated from urban areas, and then from each other since the typical tobacco farm is small and needs only a few workers. The Virginia climate during harvest season is wet in the mornings and hot and sticky during the day. Tobacco workers complain about the heavy, gummy, bad-smelling leaves whose residue adheres to clothes.

Some potential workers that we interviewed distinguished the light tasks that they were willing to do from the heavy field labor done by the H-2As (or undocumented foreign workers, as in North Carolina). In all, we had 17 responses that distinguished between light and heavy tobacco work; of these, 10, or 59 percent, said they would not do the heavy tasks.

Alternative Job Opportunities

Complementary Jobs in Agriculture

U.S. workers may not respond to recruitment for tobacco field jobs because of the greater attractiveness of other jobs. We found in our case study area that there are two kinds of alternatives: other jobs within agriculture and other jobs in other sectors.

Work on tobacco farms in our case study area has become specialized, with U.S. workers doing light tasks and foreign workers doing the heavy work. Light tasks include transplanting tobacco seedlings at the beginning of the season and handling the leaves in curing barns at the end of the season. Heavy tasks include irrigating, controlling the growth of the plants by pruning (called suckering and topping), hoeing weeds, and harvesting. According to estimates by Virginia growers in our case-study area of the total labor hours by task and by type of work force, family labor or hired local labor did 59 percent of the light tasks, while foreign workers did 93 percent of the field tasks. (We found a similar pattern in eight North Carolina tobacco farms, where light tasks were even more dominated by local labor, although they still did 31 percent of heavy tasks as well; as in Virginia, foreign labor predominated in the heavy work.) See table 3.1.

Table 3.1:Grower Estimates of Tasks Done

	Virginia workers		North Carolina workers	
Tasks	U.S.	H-2A	U.S.	Undocumented
Light	59%	41%	69%	31%
Heavy	7	93	29	71

Whether U.S. workers have been attracted to other jobs or have been crowded out of tobacco jobs is difficult to determine retrospectively. Nor can we quantify the numbers of jobs involved in processing the crop, such as work in the curing barns, that may have been created or the number of field jobs that may have been lost over the years as the tobacco growers have found a dependable labor supply among foreign workers.

Our data can be viewed in two ways. On the one hand, without the foreign workers the industry might have been less profitable, and with the foreign workers, jobs for U.S. workers may have been preserved or even expanded. The attitudes we heard in interviews certainly suggested that U.S. workers were not available for the heavy tasks. On the other hand, the pronounced absence of U.S. workers in Virginia field work (and a similar but less dramatic pattern in North Carolina) suggests that some domestic workers may have been displaced, to compete with the remainder of the local work force for the other tobacco jobs, or for other work outside of tobacco.

Job Opportunities Outside of Agriculture

It is very likely that non-farm jobs attract local workers who, without these options, might have worked in tobacco. Young people were one earlier source of seasonal farm workers. In southern Virginia, the teenage farmworkers still available and important in the 1970s disappeared in recent years with the growth in fast food and other job opportunities. Government-sponsored summer job programs were an attractive option for some of the rural youth who might in earlier years have chosen farm work.

To understand alternative job opportunities, we examined state employment statistics in Virginia for the four tobacco growing counties in the case study area. We considered manufacturing jobs only and found in the last decade the number of jobs in these four counties increased by about 1,000, or 6 percent, to 18,977. In the summer of 1987, the average weekly wage in those jobs ranged from $230 to $440 (depending on the county) or well above the $160 to $199 which would be earned by full-time work (if it were available) on a tobacco farm at the fairly common rate of $4.00 per hour or at the AEWR rate of $4.98 per hour. Manufacturing jobs grew even more (12 percent) in the five adjoining North Carolina counties from 1978 to 1986 (the latest year for which data are available). There, too, weekly wages were all higher than the tobacco comparison figure of $160 per week; the lowest average weekly wage in manufacturing in the five counties was $226, the highest $301.

Declining Interest in Farm Employment Generally

General attitudes probably influence individuals' responses to job opportunities, such as opinions about the long-term possibilities in different sectors. For example, in our contacts with U.S. workers as we attempted to find interest in doing tobacco work, we spoke with 26 who expressed an opinion about remaining in farm work. Half said they were hoping to get out of farm work altogether. The others were willing to continue doing at least seasonal farm work (but not necessarily field tasks in tobacco).

Observers told us that younger people would not consider tobacco work, which is part of their general lack of interest in farm work. Some families in the area we visited in North Carolina had moved from farms to small towns because of the availability of public housing. As a result, the children did not have any farm experience as they grew up.

Government Benefits as a Contributor to Labor Shortages

Some people in the case study area believed that local workers are unavailable because welfare or unemployment benefits are more attractive than the added income that might come from part-time farm work. Growers and employment officials gave this explanation as we discussed the history of their efforts to find needed workers for the tobacco fields. This view, while not implausible, ignores the observations of social service officials that a relatively small pool of potential workers are locally receiving benefits.

We checked with social service officials in tobacco-growing counties in both Virginia and North Carolina. We found that for an unemployed person heading a household with two children, the basic cash and food stamp benefits totaled only $444-$473 per month. An individual taking on part-time work (100 hours) at the minimum wage would lose some benefits and end up with a net increase in income of at least 29 percent, but this adds only about $1.50 per hour worked to pretax income.[7] Officials in both counties believed the question of the attractiveness of additional income is irrelevant, as they judged that few employable people are receiving assistance. In both states, the public assistance caseloads included households whose members were chiefly the elderly, women, and children. The officials said those who could work already had jobs. One county official stated that only 72 to 84 "to some extent employable" persons could be found among that county's public assistance recipients.

We also found that the number of people locally receiving unemployment insurance benefits would have been insufficient to supply the number of workers needed. We found 86 people collected unemployment insurance benefits just before the start of tobacco harvest season in July 1987 in Mecklenburg County, Virginia. In Granville County, North Carolina, there were 190 total claimants. Both figures include unemployed workers from all types of jobs, not just agricultural jobs, and again the

[7]We examined two counties that are in the center of the Virginia-North Carolina tobacco-growing region. In Mecklenburg County, Virginia, in 1987, an unemployed single parent with two children received a total of cash and food stamp benefits of $444 a month. If the individual worked 100 hours a month in tobacco at $3.50 per hour, the combination of wages and somewhat reduced benefits would be a total gross income of $598. The work would thus yield a net increase in income of $154, or 35 percent. Monthly earnings could be as high as $546 before losing eligibility for cash benefits (and Medicaid benefits could still continue).
In Granville County, North Carolina, the same household received a combined cash and food stamp benefit of $473 a month. Again, adding about 100 hours of work at about the minimum wage (earnings of $360), the new combined income would be $610, for a net increase of $137, or 29 percent. Monthly earnings could be as high as $512 before losing eligibility for cash benefits (Medicaid benefits could still continue), and under some special circumstances, assistance eligibility could continue for this family even with earnings as high as $800 a month.

small numbers show that there is no large reserve pool here. In addition to providing these data showing that the growers' need for hundreds of workers could probably not be met from welfare or unemployment rolls, employment and welfare officials in the case study region gave their opinion that other factors were much more significant, chiefly the negative aspects of the work and the pull of other job opportunities.

U.S. Worker Opinions Mixed on Causes of Shortage

In interviews with U.S. workers, we explored their opinions of the causes of the shortage of U.S. labor for tobacco work. Of the local tobacco workers we spoke with in southern Virginia, several resented the H-2A workers and spontaneously brought up the issue. They spoke of wanting to be paid the same as foreign workers, and most probably would have agreed with the individual who said: "We're just as good as they are." However, at the same time, one worker admitted to us that the foreign workers worked harder than the local workers. Another worker indicated the combination of forces at work. In her opinion, most U.S. workers were leaving voluntarily: "They don't feel squeezed out."

The farm labor contractors providing U.S. and foreign workers to the vegetable fields of the Eastern Shore also gave a mixed view of the availability of U.S. labor for tobacco work. One contractor said he thought that there were enough local people to do the work and also that he did not like tobacco work and would not go. Another contractor who had foreign workers in his crew also said he would not take his crew to tobacco work. A third contractor who employed foreign workers said that his men would go if he told them to but that he and his crew could make more money on the Eastern Shore. A contractor from Florida with an American crew had a different view. She stated that she would definitely be interested in going to the tobacco area if she and her crew could make a decent living. She bitterly complained that, wherever she went, the foreign workers were taking work away from her and her American crew.

The expressed attitudes of the domestic workers and the crew leaders we spoke to do not provide a clear answer to the question of whether foreign workers produce and maintain jobs for domestic workers by keeping the tobacco industry viable or mainly substitute for domestic

labor in tobacco. It seems certain that both effects of the foreign workers are occurring simultaneously.[6] Some U.S. workers bitterly complain of the foreign workers who take their jobs, but at the same time, most acknowledge that they are unwilling to do those jobs and that their children are moving away from farm work.

Shortage of Domestic Migrant Workers

In addition to examining explanations for the shortage of local labor, we sought information that might suggest why traditional sources of domestic migrant farm labor seemed not to be linked to the labor demand in Virginia tobacco. Texas and Florida still supply migrants to the rest of the country (and even to other crops in Virginia). As in the case of local labor, reasons for the shortage probably include migrants' changing evaluation of the specific job offers (tasks, wages, work conditions) and changes in the alternatives available.

To obtain this information, we gathered the views of persons knowledgeable about domestic migrant recruitment, employment service officials in the two states that supply many migrant workers, and four persons involved in contracting migrant workers. We did not try to independently verify their views. Whether fully accurate or not, their views about the fairness of growers' treatment of U.S. workers or the desire of U.S. workers to do agricultural work very likely affect their efforts as potential intermediaries in the recruitment of migrant labor for Virginia tobacco jobs.

Florida and Texas employment service officials we spoke with reported that recruitment for Virginia tobacco jobs was affected by information circulated by returning migrants who told others of their bad experiences and their conclusion that these jobs were not worth the trouble. In addition, officials' own experiences with difficulties in placing migrants led them to believe the workers. Official correspondence

[6] In other crop areas we visited during our review, where foreign labor has also come to be used, we found the same combination of likely impacts. In the apple industry of West Virginia, the harvest work of a predominantly foreign labor force brings in an apple crop that creates almost year-round farm employment for a labor force approximately one quarter as large as the seasonal labor force. In Idaho, fields irrigated by foreign workers grow field crops thinned and hoed mostly by U.S. farm workers. In the cabbage growing area of Virginia, the tractor drivers and field packers and baggers, who are mostly U.S. workers, work in an industry where the cutting of the cabbage is done almost entirely by foreign labor.
In each of these cases, the effect of the foreign labor is ambiguous. On the one hand, because of its high output per wage dollar, the foreign labor tends to expand employment for U.S. workers in ancillary farm activities. But in each case some of the foreign workers performed the tasks done by the U.S. segment of the labor market, which displaces domestic workers, and over time, the foreign workers spill over into tasks still done chiefly by U.S. workers.

revealed that the head of Florida's state employment service was so frustrated by the bad experiences that Florida workers and crew leaders were having in H-2A crops that in 1982 he threatened to reject the job orders. Florida officials cited what they believed to be impermissible discrimination against U.S. workers, for example in a situation where a southern Virginia grower association proposed to require every migrant crew member to have a U.S. birth certificate. (A "U.S. worker" is defined by the H-2A regulation as any worker, whether U.S. national, citizen, or legally admitted alien, who is authorized to work permanently within the United States; thus birth origin or its documentation is not the decisive factor.)

The chief state employment official in Florida complained directly to DOL about this incident and other practices interfering with fair opportunity for their migrant workers. He stated that in the 1982 season, Florida received job orders for 6,389 openings but successfully placed only 650 people. He suggested that job orders were "issued on a pro forma basis," that a number of the openings "were not bona fide," and that Florida migrants were not receiving a fair opportunity since foreign workers "were being given preference, even in the face of a surplus of available domestic workers." Along with other practices, he cited lack of family housing as a major barrier to fair opportunity for Florida workers. He closed the letter offering to work on alternatives that could avoid "using Florida workers as the unsuspecting victims in a process designed only to obtain foreign workers." Florida officials who reviewed these 1982 statements in March 1988 told us "we in Florida still contend...that equitable service is not being provided to domestic workers, and this remains a major concern to us."

In the neighboring North Carolina tobacco area, growers had in the past used Texas farmworkers, as arranged by the state employment service. A North Carolina state employment service official who had recruited these workers in the 1970s in effect confirmed the sending states' officials' views. He described the tobacco growers' attitude by the late 1970s towards out-of-state workers he referred to Virginia as follows: "They didn't want them. They gave them poor housing, poor jobs, and chased them away. I finally stopped sending them until the legal aid people made us do it again."

An experienced Texas employment service clearance officer who worked many times in the 1970s and early 1980s with the Virginia and North Carolina employment services to recruit Texas farmworkers expressed pessimism to us about referring domestic migrant

farmworkers to H-2A areas now, in light of the growers' history of satisfaction with H-2As. "As long as employers know that if these workers don't work out, then they can get others, it's not going to work. If the growers didn't have these other workers to fall back on, the Texans going up there would be treated differently. There would be housing, transportation, and so on. Right now it's not worth it [to refer domestic migrant workers]."

Changing attitudes among the migrants play a part. For example, two crew leaders who hire for the apple orchards of Virginia and West Virginia (which traditionally have used Florida labor) reported that American migrants are an aging group, and one added that fewer want to come than in previous years. One said that if he had not found an alternative labor source in authorized refugees he would have gone out of business. This view was repeated by a Florida labor contractor's spouse whose husband had shifted to Haitian crews in recent years. Just as we had heard about the attitudes and values of local farmworkers, this woman told us that "Americans don't want to do agriculture any more." (We know that it is not due to increased use of unemployment insurance benefits by Florida farmworkers; claims by the combined group of agriculture, forestry, and fishing workers have declined in the last 5 years.) On the other hand, one contractor from Florida we interviewed on the Eastern Shore claimed that Americans do still want the work but that the foreign workers have taken it away.

However, growers who use more intensive recruitment practices can maintain a continuing supply of U.S. migrant workers. We found a successful example of recruitment of U.S. migrants in the Roanoke, Virginia, apple industry. There, growers told us that they invested considerable time and effort, by writing or even personal visits, in keeping in touch with their crew leaders and workers in Florida to obtain work commitments from them for the following year. Workers can count on advance travel payment (through the crew leaders), can bring families because of the suitability of the housing for couples and children,

and can look forward to a full season of work arranged by multiple growers or the crew leader intermediaries.[7]

A veteran employment service official in eastern North Carolina who successfully recruited out-of-state workers before the heavy influx of foreign workers believed that American workers could be recruited again. He did stress that it would "take a while to crank up that system again." However, a Florida employment service official doubted that the successful recruitment we observed could be expanded very much. In his opinion, positive outreach to individuals either by the grower or someone representing his interests might not ensure the return year after year of a quality work force for the tobacco harvest. As another example of the effects of unusual recruitment approaches, widespread job notices and radio ads about the 1987 shortage of migrant fruit pickers in Washington produced a flood of workers—eventually, more than were needed.

This suggests that, due to the influx of foreign workers, some U.S. migrants have been discouraged from migrating to farm jobs in the Virginia-North Carolina area. It also appears that others have dropped out of the migrant stream, just as local workers in Virginia and North Carolina have quit farm work, because of expanded employment possibilities outside of agriculture in Texas and Florida. Both effects seem to be occurring, and it is difficult to determine the relative weight of each. It also seems that growers presently have little incentive to vigorously test the U.S. labor supply, as discussed in the next section. Whether the new recruitment rules will cause any change in grower recruitment practices remains to be seen.

[7]In explaining its rules for the H-2A program, DOL has said that it does not believe the statute requires that growers make jobs attractive to U.S. workers (either by wage offers or nonwage conditions). The wage requirements are discussed extensively in the previous chapter. Concerning nonwage matters, the typical standard required by DOL is that a grower must offer U.S. and foreign workers comparable conditions, and those must equal the local prevailing practice. However, if foreign workers have been used almost exclusively in some tasks for years, there is no competing U.S. labor supply whose current conditions can form a standard for comparison. The Florida official's letter, cited above, suggests the frustration of someone who knew what was needed to make job offers acceptable to an available migrant work force.

Grower Decisions in Light of U.S. Worker Shortage

In light of the shortage of U.S. workers resulting from all the factors just discussed, we found it plausible that Virginia tobacco growers in 1987 had turned to a non-U.S. labor market to find workers. If not enough U.S. workers were available under the conditions growers offered, they had several options. They could either alter their agricultural and business practices to adapt to the supply of U.S. workers, or without changing their current practices they could hire foreign workers who evaluate the present conditions of work more favorably. (Foreign workers' judgments are very different since they come from less developed countries with radically different wages and working conditions.)

Using standard business criteria, we examined the foreign labor force growers have chosen, in order to understand the competition that U.S. workers face. We found evidence in our case study that H-2A workers appear preferable on a number of the criteria growers would probably use in hiring decisions, including reliable networks for recruitment, low turnover, low supervision costs, and high productivity. Figure 3.2 on page 88 is an outline of the options growers face in weighing alternative labor supplies.

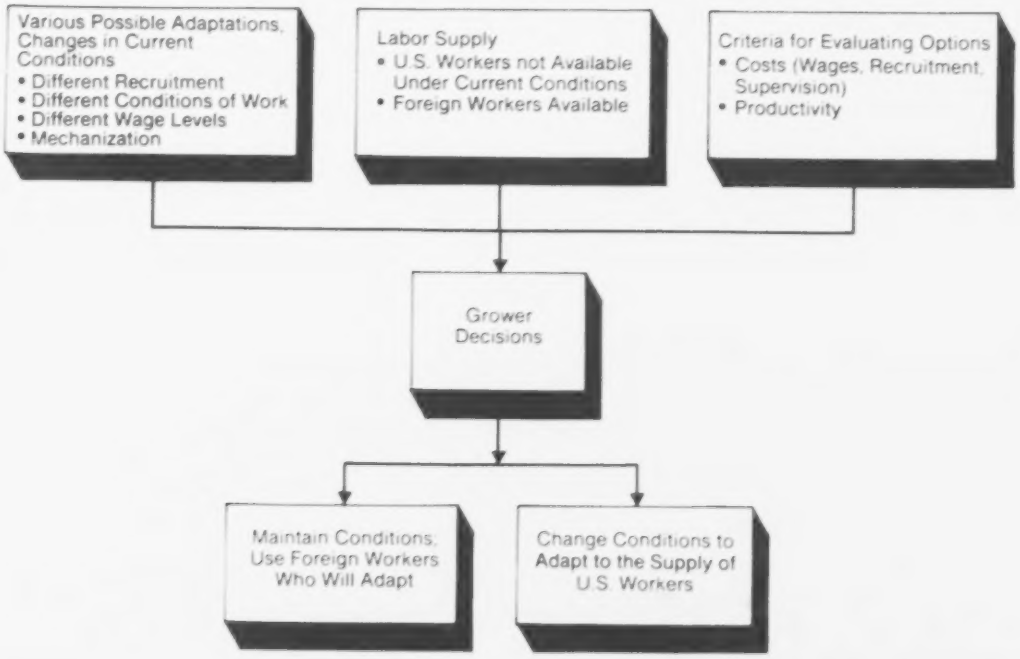
A Reliable Network for Selection and Recruitment

One advantage to growers using foreign labor is in the area of recruitment and selection. In the Virginia tobacco case, we found that the growers could rely on an established recruitment network to provide H-2A workers with desirable traits. Some workers told us that they could not get tobacco jobs without undergoing screening by a middleman (sometimes two). Both of the associations of tobacco growers in southern Virginia that use H-2A workers had recruitment systems that were alike in their main features. The path for some workers for one association begins in an interior village in Mexico where the father of a farm supervisor in Virginia screens workers and places them on the job list. According to a number of foreign workers, the second association recruits through an American, who works with other intermediaries in interior states of Mexico to place workers on the job list.[a]

An advantage related to the screening arises from low turnover. Reduced turnover lowers the costs of repeated recruiting. Observers in the area agreed that it is rare that a foreign worker screened in Mexico and sent through these channels is asked to leave or even found wanting

[a]For other crops, H-2A workers are also recruited from other countries, particularly Caribbean countries.

Figure 3.2: Grower Options in Light of Labor Supply Conditions


Various Possible Adaptations, Changes in Current Conditions
• Different Recruitment
• Different Conditions of Work
• Different Wage Levels
• Mechanization
Labor Supply
• U.S. Workers not Available Under Current Conditions
• Foreign Workers Available
Criteria for Evaluating Options
• Costs (Wages, Recruitment, Supervision)
• Productivity
Grower Decisions
Maintain Conditions; Use Foreign Workers Who Will Adapt
Change Conditions to Adapt to the Supply of U.S. Workers

during a season. As the principal recruiter told us, "I don't want workers who are a nuisance." In contrast, of the U.S. workers referred to the tobacco growers for harvest tasks, we did not learn of one who lasted through the season.

Growers could count on an adequate supply of foreign workers in recent years and evidently rely on experienced individuals to return for subsequent seasons as well. We have no direct data on the overall proportion of individuals in the 1987 group that had worked in 1986 for the same employer (grower or association). The specific H-2A workers of Virginia that we interviewed told us they had an average of 4.9 years in the industry and the general locality where they were working. (Even the undocumented foreign workers we interviewed in North Carolina had been returning repeatedly to the same area, averaging 4.7 years in local tobacco work.) Despite limited English language skill, the groups of H-2A workers appear to be quite able to make needed arrangements and travel long distances from the interior of Mexico to find their prior bosses. The state employment service in North Carolina had helped at least some growers find foreign workers in recent years, but officials

told us that now these workers find the tobacco growers entirely on their own.

Reduced Supervision Costs Due to Worker Experience

Growers using foreign workers may also prefer them because of the smaller effort needed to oversee them compared to workers from other potential sources (such as U.S. teenagers, the general unemployed population, or farmworkers with experience in other crops). The typical small tobacco farm operated by the owner who lives nearby does not require the middle-management post of foreman or crew leader. Growers can reduce their own work load by relying on returning H-2A workers to act as trainers for the newcomers that arrive each year. This is also essential because, despite years of use of H-2As from a non-English-speaking country, few growers we interviewed effectively speak the workers' native language and, as a result, relationships of trust build slowly. However, since most of the H-2A and other foreign workers have been in the industry for several years or more, most growers are probably able to obtain at least some experienced workers who can act as supervisors.

Foreign Workers Are Believed to Be Highly Productive

Probably the most critical criterion growers use in evaluating their options in the face of the U.S. labor shortage, in addition to costs, is the productivity of alternatives. In the short run, the only option is an alternative labor force. (Only in the longer run could growers consider options that might reduce the type or amount of labor needed or substitute capital for labor. Leaving the tobacco business could be an additional option or necessity if other options appeared or proved to be unworkable.) Growers repeatedly told us that a major basis for their preference for foreign workers is that compared to the available local workers, foreigners are willing to work harder and that they deliver higher output.

We could not find any existing data to compare the H-2A or undocumented workers with their U.S. counterparts. However, we spoke with dozens of current foreign and U.S. workers in both Virginia and North Carolina, and our data on this group of workers in tobacco and other crops, while not definitive, can suggest some differences between the two groups. The foreign group were experienced field workers. The few domestic workers we observed and interviewed on the H-2A farms were a mixed group of men and women, and a larger percentage were over 40 years old. This older, more female domestic work force, according to growers, has weaker motivation to keep on with the tasks, and the

result is that there is a higher turnover. As noted in the discussion above of recruitment and screening, we did not hear of any foreign worker leaving during the season.

Many employers reported their observation that foreign workers work hard, especially in comparison to the work effort of the small number of U.S. workers they currently can find. One North Carolina grower told us that foreign workers work "one-and-a-half times as fast" as locals. A Virginia tobacco sharecropper argued that the foreign workers were more reliable as well as better workers than the local workers. One U.S. worker noted that Americans did not want to work as fast as foreigners; another said that, although not as good as U.S. workers, foreigners would work cheaply.

We found a striking agreement among numerous growers, the sharecropper cited above, experts at the Agricultural Extension Service, and state employment service officials that the foreign workers were more productive. We did not have any data to make a formal test of the productivity advantage of the H-2A or undocumented over domestic workers. However, the consensus of opinion, together with the growers' requests for such workers year after year, offers persuasive qualitative evidence of the business advantages of this labor force.

In addition to the specific cost and productivity factors we found in our case study area that could affect growers' labor decisions, all H-2A employers enjoy a tax advantage as they are exempt from making employers' contributions to the unemployment insurance (in some states) and Social Security programs for their H-2A workers. (Some H-2A growers with smaller operations would not be required to pay unemployment insurance even if they had hired only domestic workers because most states have adopted the federal law on unemployment insurance related to agricultural labor, which limits coverage to larger farms.)

Conclusions

While meeting the job conditions, wages, and recruitment requirements of the H-2A regulations, growers in our case study were faced with a shortage of U.S. workers to harvest tobacco. Tobacco work is a relatively arduous and unpleasant way to earn a living, which provides only seasonal employment and may require migration. The local pool of workers available for tobacco activities has lessened, probably due to expanded job alternatives, changed attitudes toward tobacco work, and

other factors. Expectations of unfair consideration may also have lessened the response of migrant domestic workers to the growers' recruitment effort.

Tobacco growers in the region face strong competition from lower cost foreign producers, despite protective tariffs. Since growing tobacco is expensive and labor costs are an important part of this cost, the grower is under pressure to hold down labor costs while maintaining the highest productivity.

The H-2A program allowed the tobacco growers legal access to a large pool of foreign workers that was adequate to meet the growers' need for labor and willing to accept the offered wages and working conditions. Opinion and other evidence indicate that these specially selected foreign workers are a highly productive and reliable source of experienced labor. Thus, at the wages and conditions offered under the H-2A program, growers recruited many more foreign than domestic workers and also selectively recruited foreign workers of apparently higher average productivity than that of the referred domestic workers.

In this context, DOL appropriately certified a shortage of qualified workers available for the tobacco work. DOL approved job orders that met their requirements of wages and conditions deemed necessary to protect similarly employed domestic workers. The required recruitment procedures were completed. Few domestic workers were referred or hired, and thereby DOL's test of a shortage relative to a grower's demand for workers was met. DOL thus approved the certifications of almost all of the foreign workers that the growers had requested.

The protections afforded to those few domestic referrals appear weak because of the incomplete information available to DOL on the outcome of the referrals. Information typically comes only from the growers' account of the outcome, either firsthand or from the employment service; moreover, DOL did not receive routine information on the outcome of referrals after the certification date.

Optimally, we would like to know the extent to which recruitment practices and outcomes in Virginia tobacco parallel those in other H-2A crops. The Virginia tobacco case study—while carefully selected, as we discussed earlier—cannot yield conclusions about the wide range of labor supply and demand situations in which foreign workers are now certified. For example, domestic migrant workers may be more attracted to areas with longer seasons due to a mix of crops or where crewleaders

can keep their crews together on larger farms. Our resources, however, precluded examination of more crops. Nevertheless, our case study highlights the continuing policy dilemma of reconciling the competing interests of U.S. labor and growers, which is probably present in varying degrees in every crop area where H-2A labor is used. The balance between these competing interests may change in the future because of the potentially far-reaching effects of IRCA on both H-2A recruitment practices and the aggregate supply and demand situation for agricultural labor.

Whether other recruitment requirements—such as enhanced wages, conditions, or recruitment in other states—would have resulted in the recruitment of substantially more domestic referrals is beyond the scope of this study. However, IRCA has changed recruitment requirements and may change the pool of available workers. The IRCA provisions for positive recruitment (effective for H-2A applications after June 1, 1987) can require growers to conduct multistate recruitment, which may be more effective than recruitment through employment services. It is uncertain that H-2A growers will succeed in finding a pool of qualified, willing, and available workers using the recruitment methods used by non-H-2A growers since they will now be competing with the non-H-2A growers for the workers. Moreover, IRCA may lessen the aggregate supply of agricultural workers by removing undocumented workers from the labor supply (employers of undocumented seasonal agricultural workers can be sanctioned beginning December 1, 1988). If the aggregate supply of agricultural workers is diminished, IRCA could lead to changes such as higher wages, different production methods, or different levels of production. It is too soon to determine whether positive recruitment will lead H-2A growers to establish more effective recruitment networks for domestic workers under such potentially changed conditions.

Recommendation to the Secretary of Labor

We recommend that the Secretary of Labor improve worker protections under the current law by finding means to incorporate referred workers' accounts of reasons for not being hired or being fired. Such means might include requiring the state employment service officials to try to contact these persons to get their accounts. These persons may be difficult to contact, but this activity might exert general pressure to ensure that all referrals would be rejected or terminated only for lawful job-related reasons.

Technical Data on the USDA Survey

Tables I.1 and I.3 provide data on the following U.S. regions:

Northeast I: Connecticut, Maine, Massachusetts, New Hampshire, New York, Rhode Island, Vermont
Northeast II: Delaware, Maryland, New Jersey, Pennsylvania
Appalachian I: North Carolina, Virgina
Appalachian II: Kentucky, Tennessee, West Virginia
Southeast: Alabama, Georgia, South Carolina
Lake: Michigan, Minnesota, Wisconsin
Cornbelt I: Illinois, Indiana, Ohio
Cornbelt II: Iowa, Missouri
Delta: Arkansas, Louisiana, Mississippi
Northern Plains: Kansas, Nebraska, North Dakota, South Dakota
Southern Plains: Oklahoma, Texas
Mountain I: Idaho, Montana, Wyoming
Mountain II: Colorado, Nevada, Utah
Mountain III: Arizona, New Mexico

Note: The USDA National Agricultural Statistics Service provided us with the data in table I.1. We compiled its data from various issues of Farm Labor and computed the difference in hourly wage rates as shown in table I.2. Table I.3 is also a compilation of Farm Labor data.

Table I.1: Target Coefficients of Variation for Agricultural Labor Survey

Region	Self-employed workers		All hired workers		All hired wage rates	
	Target	July 1987	Target	July 1987	Target	July 1987
Northeast I	12.0	13.4	15.0	12.2	6.0	6.3
Northeast II	12.0	14.7	15.0	17.6	6.0	7.0
Appalachian I	12.0	10.2	15.0	11.1	6.0	4.3
Appalachian II	12.0	8.8	15.0	14.9	6.0	6.0
Southeast	12.0	12.4	15.0	14.6	6.0	4.2
Florida	12.0	26.3	10.0	11.4	3.0	3.1
Lake	7.0	4.7	12.0	12.0	5.0	4.8
Cornbelt I	7.0	4.4	12.0	13.5	5.0	5.2
Cornbelt II	7.0	4.3	12.0	13.4	5.0	5.6
Delta	7.0	7.4	12.0	10.5	5.0	2.9
Northern Plains	7.0	4.6	12.0	11.5	5.0	3.5
Southern Plains	7.0	10.6	12.0	13.2	5.0	3.3
Mountain I	20.0	8.8	20.0	15.1	5.0	2.8
Mountain II	20.0	24.3	20.0	26.8	5.0	5.3
Mountain III	20.0	25.9	20.0	22.1	5.0	2.8
Pacific	7.0	8.6	12.0	11.4	5.0	4.7
California	12.0	10.6	10.0	9.8	3.0	2.8
Hawaii	5.0	1.1	5.0	4.7	2.0	1.5
U.S. total	**2.5**	**2.2**	**3.5**	**3.4**	**1.5**	**1.3**

Table I.2: Hourly Wage Rates for Agricultural Service and Field and Livestock Workers

	California			Florida		
	Agricultural service	Field and livestock	Difference	Agricultural service	Field and livestock	Difference
Apr. 1985	$5.74	$5.22	+$0.52	$5.49	$4.30	+$1.19
July 1985	5.94	4.85	+1.09	5.19	4.24	+0.95
Oct. 1985	6.68	5.21	+1.47	5.42	4.35	+1.07
Jan. 1986	5.89	5.05	+0.84	5.08	4.41	+0.67
Apr. 1986	6.96	5.13	+1.83	5.04	5.00	+0.04
July 1986	6.61	5.23	+1.38	4.80	4.50	+0.30
Oct. 1986	6.75	5.23	+1.52	5.39	4.62	+0.77
Jan. 1987	6.90	5.18	+1.72	5.78	5.62	+0.16

Table I.3: Annual Average Hourly Wage Rates for Field and Livestock Workers[a]

Region	1987	1986	1985	1980
Northeast I	$4.32	$4.17	$3.78	$2.88
Northeast II	4.83	4.17	3.90	3.29
Appalachian I	4.17	4.02	3.81	3.08
Appalachian II	3.90	3.79	3.82	3.07
Southeast	3.88	3.73	3.46	2.94
Florida	4.91	4.66	4.50	3.98
Lake	4.22	3.91	3.69	3.03
Cornbelt I	4.60	4.38	4.24	3.45
Cornbelt II	4.25	4.10	4.16	3.42
Delta	3.91	4.05	3.88	3.21
Northern Plains	4.35	4.61	4.50	3.41
Southern Plains	4.47	4.49	4.07	3.20
Mountain I	3.95	4.15	3.60	3.20
Mountain II	4.29	5.19	4.12	3.33
Mountain III	4.30	4.43	4.26	3.11
Pacific	5.26	4.52	4.69	3.90
California	5.41	5.17	5.12	4.26
Hawaii	7.53	6.43	6.48	4.81
U.S. total	**4.57**	**4.42**	**4.21**	**3.45**

Note: Excludes agricultural service workers. Annual average wage rates are averages of the published wage rates from each of the quarterly survey weeks weighted by the number of hours worked during the survey week.

[a]For California, Florida, Hawaii, the Southern Plains, and Mountain III regions, the annual average is based on data collected for January, April, July, and October. For the remaining regions and the United States, the annual average is based on data collected for April, July, and October.

The Southern Virginia Tobacco Industry and Its Labor Supply History

The Economics of Piedmont Tobacco Culture

Although the Piedmont area spanning the Virginia-North Carolina border has been tobacco country for hundreds of years and is the oldest area for growing flue-cured tobacco in the country, it is not the most economically efficient. The Piedmont has more hills than the larger growing area in the coastal plain of eastern North Carolina, so the machine harvesters that work about 20-25 percent of the eastern North Carolina crop are not feasible, and thus virtually all the Piedmont tobacco must be harvested by hand. Piedmont growers have smaller acreages, use more labor per acre, and more family labor as opposed to hired labor. Despite the challenges, growers hang on, perhaps aware, as one told us, that no other farm operation in the Piedmont (such as growing fruits and vegetables) would yield produce that could compete with that from the better growing areas elsewhere in Virginia and North Carolina.

While tobacco is the major field crop in the Piedmont, agriculture generally is dwarfed by the growing industrial sector of the south. However, as with all U.S. agriculture, a relatively small base of tobacco growers and employees are the foundation of an extensive industry of suppliers and manufacturers both locally and across the state and region. Furthermore, the existing tobacco industry cannot be moved from this area because the legal allotment of tobacco-growing rights (called quota) is assigned by the Department of Agriculture by county and cannot be taken across county or state lines.

The Piedmont growers' high-quality flue-cured tobacco faces a shifting market as the cigarette industry changes the composition of its products to use less expensive kinds of tobacco, grown elsewhere or imported. By 1986, production of flue-cured leaf in Virginia dropped by more than 50 percent from 1981 levels and, even so, domestic surpluses mounted. During those years, the prices paid to farmers in Virginia also fell by 9 percent. Growers have little flexibility to raise their prices because of pressure from lower-cost foreign producers, even though there is a protective tariff on imported tobacco. (The government-set tobacco price is already twice the world price.)

Despite these trends, tobacco is still one of the highest value crops in the United States. A typical acre yields about 2,000 pounds of tobacco, and at the 1987 average price of about $1.50 per pound, the gross receipts can be about $3,000 per acre. In Virginia, tobacco ranks first among field crops in the value of cash receipts, 58 percent higher than the value of the second-ranked soybean crop. Except for strawberries, few

other crops anywhere can be so lucrative, which may encourage growers to stick with the crop even in adversity, hoping for a change of conditions.

Growing the crop is expensive, however. Expenses can total from $0.80 to $1.20 per pound, not counting leasing the growing rights (59 percent of the Virginia growers' quota was leased, among the group we interviewed, and 83 percent of that of the North Carolina growers we interviewed), which adds an average of $0.40 per pound. Thus, with total costs ranging from $1.20 a pound and higher, selling the product at about $1.50 per pound provides at best only a small profit margin. A grower who does not have an efficient operation and who pays to lease the rights to grow his tobacco is in danger of losing money.

Labor costs are a critical part of the total costs of tobacco production because of the large amount of work needed to start tobacco seedlings, transplant them, irrigate and tend the fields, harvest the leaves, and handle them in curing barns where they are dried with heated air. We calculate that for the current state of technology and productivity in the Piedmont tobacco industry, a wage change of $2 an hour would affect the growers' cost to produce a pound of tobacco by about $0.24 or 16 percent of the current price per pound. Thus, to maintain some profit

margin, the grower (especially a grower with leased quota) is under tremendous pressure to hold labor costs to a minimum and, at any given wage, to obtain the highest productivity possible.[1]

As the work is hard, and done under disagreeable conditions, it may be no surprise that workers with any other opportunities flee the tobacco fields. As growers have struggled to keep costs down, stay efficient, and cope with shifting preferences of domestic workers, it is not surprising that foreign workers (H-2As in southern Virginia and non-H-2As in North Carolina's border area) have come to be viewed as a vital necessity by the Piedmont growers. When asked what would happen if the influx of foreign workers were to stop, one Virginia grower who owns $70,000 of tobacco quota answered, "I'd lose $70,000 overnight."

Foreign Sources Replace Changing Domestic Labor Supplies

Growers and officials in the area told us how they developed foreign sources of labor supply. Replacing pre-Civil War slave plantations, sharecropping by both blacks and whites (in which an owner parcelled acreage into small plots worked by tenants, with the costs and proceeds split) was quite stable until a generation ago. Rising costs encouraged some mechanization, which made farming small acreages more and more difficult beginning in the 1960s, coincident with the growth of other

[1] As noted in chapter 3, common opinion holds that foreign workers are more productive than available domestic workers. Verification of this opinion is beyond the scope of this study. However, we can illustrate the type of data that would have to be gathered across a sample of farms to obtain a generalizable conclusion on this issue.

We obtained data on workers' output and hours from a single farm, which permitted a comparison of U.S. and foreign workers' productivity when doing comparable tasks. We had access to wage and hour information comparing Haitians with U.S. workers in the apple orchards of Winchester, Virginia. Unfortunately, in this example the contrast is not with an H-2A work force and may be with documented workers (technically, U.S. workers). However, we believe the Haitians are in some ways similar to typical H-2A workers because they recently arrived from a less developed country and are probably from rural backgrounds.

While we cannot generalize from this limited comparison of a few workers at a single farm, our findings do illustrate the magnitude of productivity differences that may occur between groups of available workers. An apple grower allowed us without interference to inspect his books for a week's work in September 1987, which he said was typical of his experience. All of his workers were either Haitian or American. Though the records did not identify individuals by their group membership, we identified the Haitians by their first and last French names; the U.S. workers had familiar non-French names. There were data on 15 Haitians and 9 Americans. We found that the Haitians averaged 36 hours a week and 13.9 boxes an hour. The Americans worked less, averaging 25 hours a week, and their output was lower, averaging 8.5 boxes an hour. The Haitians were thus picking apples on average about 1.6 times faster than the Americans, and the combined effect of their more hours worked and faster picking resulted in the average Haitian picking 2.4 times as many apples as the average American during the week. For the season, the grower said the Americans had a much higher turnover rate.

attractive job opportunities through northward migration or in industries moving south. The younger generation moved from rural areas without hesitation, and in many cases, so did their parents. By the 1970s, tobacco growers told us they faced a labor shortage and a precarious situation in which the heavy field tasks were being done by an uncertain combination of family labor, a declining number of sharecroppers, migrants, and high school students. Growers thus welcomed the discovery of networks of undocumented workers at the same time in the 1970s.

Growers still recall vividly the summer of 1972; in the middle of July that year the stalks were turning black in the fields. The growers were desperate for labor. When a Virginia state employment service official learned of an available crew of undocumented workers brought in by a farm labor contractor in nearby Henderson, North Carolina, he went there and brought them back to the southern Virginia area. This crew, supplemented by additional undocumented workers quickly recruited, went immediately to work in the fields, and the 1972 harvest was saved. Ever since then the foreign workers have predominated in the harvest work of the Piedmont. Thus, the local workers who remained in tobacco field work at that point found themselves in direct competition with the newcomers. See table II.1.

Table II.1: Sources of Tobacco Workers in Southern Virginia

Period	Labor source
1700-1865	Small growers with slaves and some white sharecroppers
1865-1965	Sharecroppers
1965-1972	Transition (use of high school students, migrants, remaining sharecroppers)
1972-present	Foreign workers (undocumented, then H-2A) increasingly predominate in the heavy field tasks

Source: GAO interviews with growers

Permanent Arrangements to Supply Foreign Workers

Growers found ways to institutionalize the foreign labor supply first used in 1972, so that they could count on these workers in future. In 1973 a crew leader from Mexico settled in the area. Since then he has been a field supervisor for a major grower and principal staff member for the head of the growers' association. His importance stems from his continuing connection to Mexico. Many of the workers come from his home town in an area of Mexico where depressed economic conditions encourage the risky journey north. The men are recruited through his

father and his brother, and their informal system apparently applies effective criteria in screening people.

Growers adapted once again when the Immigration and Naturalization Service raided tobacco farms in southern Virginia in 1978 and found the large numbers of undocumented workers. Fortunately for the growers, a Virginia employment service official had experience with the earlier bracero program, which provided Mexican contract workers in the 1960s. He requested H-2As, and the request was approved. The Mexico network continued to supply the growers in this part of southern Virginia with workers, but now they entered as legal nonimmigrants. A nearby area, also in southern Virginia, included a second grower association which also developed its own network of connections to Mexico. (The North Carolina tobacco growers were denied certification to employ H-2As and have never used them.)

Similar Recruitment Patterns in Other Crop Areas

We found a similar pattern of shifting sources of labor supply in several other places where H-2A workers are used. Though we did not do full-season labor supply case studies elsewhere, we did gather some information in the course of field work on wage issues in fruit and cabbage-growing areas of Virginia where H-2As and other foreign workers harvest the crops and in Idaho where foreign workers move irrigation pipes. In Virginia cabbage and Idaho irrigation work, undocumented foreign workers became the predominant labor force in the heavy field tasks by the 1970s. In tobacco, this occurred for a shrinking labor force of tobacco field workers; jobs for local workers unequivocally declined. For Virginia cabbage growing and irrigation in Idaho, the cultivated acreage expanded, so the number of jobs expanded. Though this might indicate greater opportunity for local labor, in fact the jobs were almost entirely held by foreign workers. In the late 1970s, the unauthorized worker networks among cabbage and irrigation workers were legalized, as in the tobacco situation, by being transformed into H-2A recruitment systems. Just as in the southern Virginia tobacco area, Idaho growers moved toward the use of H-2As under the pressure of INS raids on their farms. Criminal charges of harboring undocumented aliens were lodged against one grower in each area just prior to the beginning of the H-2A programs in the two states. Although many of the individual members of these H-2A networks have no doubt changed from year to year, the supply of acceptable foreign workers has evidently remained reliable since the 1970s.

Comments From the Department of Labor

Note: GAO comments supplementing those in the report text appear at the end of this appendix.

U.S. Department of Labor

Assistant Secretary for
Employment and Training
Washington, D.C. 20210

JUL 27 1988

Mr. Richard L. Fogel
Assistant Comptroller General
Human Resources Division
U.S. General Accounting Office
Washington, D.C. 20548

Dear Mr. Fogel:

In reply to the letter from Eleanor Chelimsky to Secretary McLaughlin requesting comments on the draft GAO report entitled "The H-2A Program: Protections for U.S. Farmworkers," the Department's response is enclosed.

The Department appreciates the opportunity to comment on this report.

Sincerely,

ROBERTS T. JONES
Acting Assistant Secretary of Labor

Enclosure

U.S. Department of Labor's Response to the Draft
General Accounting Office Report Entitled -
"The H-2A Program: Protections for U.S. Farmworkers"

Recommendation:

"To ensure that the wage minimums set by DOL to protect U.S. workers from the adverse effects of the H-2A program are reasonably accurate, GAO recommends that the Secretary of Labor negotiate with USDA to provide routine analysis of error margins surrounding the wage estimates on which Statewide minimum hourly wage rates are based and improve the survey as necessary (which may require increased sample sizes in at least some regions) to maintain reasonably small margins of error around such estimates."

Response:

See comment 1

It is a continual concern of the Department of Labor that the best possible information be used as a basis for establishing adverse effect wage rates (AEWRs). To this end, DOL agrees to discuss with the Department of Agriculture (USDA) the technical issues raised by GAO.

See comment 2

Nevertheless, it should be noted that the scope, methodology and conduct of the surveys that produce data used by DOL to establish AEWRs fall entirely within the administrative and technical purview of USDA. Accordingly, DOL must defer to USDA's judgment as to both technical and practical considerations in implementing GAO's recommendation. In its extensive rulemaking in 1985-86 on the utilization of USDA's surveys for AEWR purposes, DOL enumerated a variety of reasons for choosing USDA's data. GAO's report does not conclude that there is any better or more reliable approach that is technically and administratively feasible which DOL might use for the purpose of setting AEWRs.

See comment 3

DOL has serious concerns about the suggestion made several times in the GAO report that the USDA survey "measures a general farm wage that appears to be lower than the average wage for U.S. workers employed in the same crop activities as H-2A workers." (See Page 5, and also Pages 2-59 and 2-74.) DOL believes this statement is unsubstantiated and unwarranted. As a result of the Immigration Reform and Control Act (IRCA) of 1986, it is probable that a much wider range of agricultural crop activities will be the

Now pages 3, 57, and 65
See comment 4

subject of H-2A applications than was the case under the H-2 program. While many employer applications will continue to seek workers for hand harvest activities, many also are expected to involve non-harvest activities such as irrigating, pruning, thinning, weeding, hoeing, nursery work and the like. Indeed most "new" H-2A applications filed since June 1, 1987, have been for such activities. Thus, DOL believes the USDA survey relating to all field and livestock workers is the most appropriate one to use in setting AEWRs for the entire range of agricultural activities possible under the H-2A program.

Recommendation:

"Provide greater oversight and guidance to the State agencies conducting the prevailing wage surveys, including revising the survey handbook and forms to improve consistency of procedures and ability to monitor quality of implementation; consider converting units of payment to a common base to ensure that prevailing wage findings are calculated on the largest possible number of surveyed workers."

Response:

See comment 5

DOL concurs with GAO's recommendations and plans to implement them if it is feasible to do so.

See comment 6

Now page 35

However, DOL first wishes to clarify a point on the purpose and intent of its prevailing wage requirement and the surveys conducted to determine prevailing wages. This requirement is not specifically tied to the H-2A program as a means to provide protections for U.S. workers against the possible adverse effect of the importation of aliens, as the GAO report mistakenly implies (Pages 2-20 and 2-21). The prevailing wage standard is a basic requirement of the agricultural clearance order system at 20 CFR Part 653, Subpart F. All intra and interstate agricultural job orders circulated through the Employment Service system must comply with this standard, including those circulated as part of the H-2A application process. This requirement and the wage survey procedures have been in existence for some time. They have served primarily as a means to prevent the introduction of substandard job orders into the clearance system. The procedures have adequately served this purpose. After H-2A employers comply with the basic requirements of the clearance order regulations as a first step, they must also comply with the additional

requirements placed on them by the H-2A regulations at 20 CFR Part 655, Subpart B. The standards in the H-2A regulations provide the additional protections DOL has determined are necessary when foreign workers are requested. The AEWR is the wage standard utilized by DOL for this purpose.

Nevertheless, DOL is aware of shortcomings in existing prevailing wage survey methodology and procedures, and has been actively examining the current handbook and forms with a view toward fine tuning them. DOL intends to establish a work group which will examine current procedures (including the handbook and forms), make revisions where desirable and necessary, and suggest methods for improving State agency performance and otherwise promoting consistency of operations. DOL will consider all the specific technical suggestions and concerns noted by GAO in the report, including conversion of units of payment to a common base. Subsequent to revision of the procedures and methodology, DOL would ensure that State agency staff responsible for conducting the surveys are properly trained and that Regional Office personnel would provide a greater degree of oversight and guidance to the States, subject to budgetary and staffing constraints and other priorities.

Recommendation:

"GAO also recommends that the Secretary of Labor improve worker protections under the current law by finding means to incorporate referred workers' accounts of reasons for non-selection or termination. Such means might include requiring the State employment service officials to try to contact these persons to get their accounts. Although GAO's experience suggests that these persons may be difficult to reach, such a monitoring activity by DOL might exert general pressure to ensure that all referrals would be rejected or terminated only for lawful job-related reasons."

Response:

DOL recognizes that one of its primary responsibilities under the Immigration and Nationality Act and IRCA is to protect the jobs of U.S. workers and to assure that U.S. workers are given a full and fair opportunity to fill the positions offered by employers seeking H-2A certification both before and after certification decisions are made.

DOL always has tried to design and enforce the recruitment and the worker protection provisions of its regulations in light of that responsibility. GAO's recommendation is agreed with in principle, and, while DOL thinks that substantial efforts already are being made to implement it, the Department will do what it can to protect U.S. workers' jobs as GAO recommends. It must be recognized, however, that there are certain practical and legal impediments, only some of which GAO recognizes, to complete implementation of the recommendation. Therefore, DOL intends to seek ways to implement GAO's recommendation in areas where it is determined it might produce positive results in enhancing U.S. worker hiring and retention, and serve as a complement to the Employment Service complaint system.

See comment 7

Now page 71

GAO's description (on Page 3-4 of the report) of the information and the process used by the Regional Office in arriving at a certification determination is essentially accurate. Normally, three days before a certification determination is due (20 days before the employer's date of need in most cases) Regional Offices receive reports from the employer and the State agency which provide information on U.S. workers referred to the employer and the outcome of such referrals. For each U.S. worker identified as hired or otherwise qualified and available, the Regional Office will subtract one job opportunity (H-2A slot) from the employer's certification. For each individual referred by the State agency, the employer must, on a person-by-person basis, account for the disposition of that worker's referral. If any individuals are not hired, the employer must give a reason for not hiring the person. Any unaccounted for referral or refusals to hire for other than lawful job-related reasons are also subtracted from an employer's total certification. Regional Offices compare the employer's recruitment report with the report submitted by the State agency for any discrepancies. When discrepancies are found, the Regional Office places the burden for resolving the discrepancy on the employer. Problems of this nature which are not resolved to the satisfaction of the Regional Office may result in further subtractions from otherwise approvable H-2A slots in an employer's certification.

DOL acknowledges that most State agencies base their reports on recruitment efforts which are submitted just prior to a certification determination on information secured only from employers. There is no procedure requiring local Employment Service offices to cross-check information supplied by employers with individual workers referred on job orders. In most cases, there

would be no need to do so as employers who are utilizing the Employment Service system in the H-2A certification process provide assurances to DOL that they will cooperate with the Employment Service in the active recruitment of U.S. workers and that they will not refuse to hire any U.S. worker for other than a lawful, job-related reason. Failure to comply with these assurances places the employer in jeopardy of having future labor certification requests disapproved.

The timing of the H-2A certification process presents significant obstacles to the cross-check procedure recommended by GAO. By law DOL is required (in most cases) to render a certification determination no later than 20 days before the employer's date of need. State agencies and employers file their recruitment reports three days before the certification determination date. As GAO notes in its report, individuals referred on H-2A job orders are often difficult to reach, and differences in accounts between employers and workers in disputed cases are not subject to conclusive determinations one way or the other after the fact. Given the constraints in timing placed on DOL by statute, the practical problems in gathering information from workers referred, and the difficulty of resolving conflicting accounts in an equitable fashion in a brief period of time, DOL believes that system-wide implementation of GAO's recommendation would have very limited practical benefit in terms of enhancing U.S. worker selection and hiring for H-2A job opportunities in a current season.

Where implementation of GAO's recommendation might prove helpful, however, is in the context of selective monitoring of "problem" employers identified through such sources of information as worker complaints or enforcement agency reports of violations of contractual obligations. Employers identified in this fashion could be selectively monitored to determine whether there existed a pattern of discrepancies between accounts of employers and workers on non-selection and termination matters. Further investigation could then be initiated in an attempt to reconcile differences in accounts given. Any eventual findings in favor of workers' claims could then result in formal determinations of violations of labor certification with subsequent corrective actions or sanctions that would apply to subsequent or future seasons, as provided for in the H-2A regulations at 20 CFR 655.110. In all such cases, employers would be given the opportunity for an expedited administrative review or de novo hearing, as required by statute.

Now page 73

On the matter of timing of referrals (Page 3-8), some clarification is in order. In arriving at a certification determination 20 days before an employer's date of need (as required by statute and regulation), DOL must consider information on U.S. worker availability which is in existence at that point in time. When U.S. workers are determined to be available, DOL subtracts the number of such workers from the labor certification determination. After the certification is granted, the employer applies to the Immigration and Naturalization Service for permission to bring foreign workers into the U.S. to fill the slots certified by DOL. DOL does not decide how many aliens will be admitted, as the report mistakenly states. After the certification determination is made, DOL is not empowered to reduce an already granted certification to take into account U.S. workers who become available after the date of the determination.

See comment 8

Referrals after certification fall under the "50 percent rule" provisions of IRCA and the H-2A regulations (except when redeterminations are requested). Employers are required to give employment to U.S. workers up to 50 percent of the work contract period, whether aliens have been certified and are working or not. There is a 3-year statutory limitation on this requirement which DOL must evaluate with a view toward continuation or modification in 1989.

DOL's policy on U.S. worker referrals under the 50 percent rule has been clearly stated for several years. (See General Administration Letter No. 46-81, September 11, 1981, and ET Handbook No. 398, March 4, 1988). State Employment Service agencies are to cease active recruitment and referral after certification determinations are made. Qualified and available U.S. workers who apply during the 50 percent period are to be referred first to non-H-2A employers who have suitable, comparable job openings.

Lacking such available openings, workers are to be referred next to H-2A employers who have unoccupied housing space and sufficient work to keep the worker gainfully employed. Only when it is not possible to refer workers under these conditions and arrangements is a referral to another H-2A employer to be made. Given this role of DOL and the State agencies in this activity, which DOL believes is fair and reasonable to both worker and employer, DOL does not believe that monitoring of employer compliance to the degree recommended by GAO is in order.

See comment 9

Now page 74

See comment 10

A point on redeterminations, which GAO touches on at Page 3-8. DOL is required by statute to act on an employer's request for a certification redetermination because of U.S. worker shortfalls within 72 hours (see 20 CFR 655.106(h)). Such an expedited determination of U.S. worker availability does not lend itself to the cross-check procedure recommended by GAO.

DOL also wishes to note that the Monitor/Advocate and Employment Service complaint systems will continue to serve as the principal vehicles for protecting workers against questionable practices of certain employers who might abuse the referral system. Enforcement of actual contractual obligations between H-2A employers and their workers is now the responsibility of the Employment Standards Administration, Wage and Hour Division, as provided for in DOL regulations at 29 CFR Part 501, June 1, 1987.

The following are GAO's comments on the Department of Labor's letter dated July 27, 1988.

GAO Comments

1. We note that DOL agrees with our recommendation and will meet with USDA to discuss ways to provide routine analysis of the reliability of the estimates upon which AEWRs are based and the improvements, if any, needed to maintain reasonably precise estimates.

2. DOL comments that we do not conclude that any alternative "approach" to setting AEWR is better or more reliable than DOL's current one. This is correct. However, the focus of our work was how to improve the AEWR statistics used within the context of the USDA survey.

3. DOL disputes our contention that the USDA survey measures a general farm wage that appears to be lower than the average wage for U.S. workers employed in the same crop activities as H-2A workers and believes that our statement is unsubstantiated and unwarranted. DOL appears to have missed the evidence we provide for our point. (See pp. 58-59.) To reiterate, the field and livestock component of the USDA survey that is used by DOL to set AEWR includes occupations not normally filled by H-2A workers. Other USDA subgroups—all workers paid on a piece rate basis and agricultural service workers—are arguably more representative of these H-2A occupations than the broad category of field and livestock workers, and both tend to have higher average wages than do field and livestock workers combined. These findings lead us to suggest that the general farm wage as measured by USDA may be lower than an average wage of a population more representative of the occupations performed by H-2A workers. We do characterize this evidence as suggestive rather than definitive, but there is little doubt that the evidence is sufficient to warrant our conclusion that the average wage appears to be lower.

4. DOL observes that the mix of occupations in the H-2A applications are now becoming more like the broad range of agricultural activities represented by the field and livestock workers category in the USDA survey. Since DOL is citing events that occurred after our review, we have no basis to judge their validity. However, DOL provided little evidence of the extent of change among "new" applications or the fraction of the total H-2A applications that are "new."

DOL appears to be arguing that these new events help justify the level of AEWR as they have calculated it. However, they have not completely

answered our concern about the representativeness of AEWR in terms of U.S. workers similarly employed to H-2A workers, nor have they articulated their criteria for setting that level of AEWR.

5. We note that DOL agrees with our recommendation to improve the methodology and procedures for the prevailing wage surveys and will establish a work group to study and accomplish these changes.

6. We have changed the text to reflect the technical clarifications offered by DOL.

7. DOL agrees, in principle, with GAO's recommendation to seek a means for incorporating referred workers' accounts of reasons for non-selection or termination, and intends to selectively implement it where feasible. They suggest that such cross-checking of employers' and referred workers' accounts of recruitment outcomes might prove helpful if applied selectively to "problem" employers. DOL concludes that the monitor/advocate and employment service complaint systems will continue to serve as the principal vehicles for protecting workers against questionable practices.

GAO agrees with DOL that time constraints imposed by statute may limit corrective actions or sanctions for violations during the current season based on information gathered from referred workers. However, implementing our recommendation might deter noncompliance during the current season if employers felt that noncompliance was more likely to be detected, thereby jeopardizing approval of future labor certification requests.

In any event, we are concerned with DOL's planned implementation of our recommendation because it fails to adequately address the serious detection issue raised by our case study. It is not clear how DOL will detect these "problem" employers. DOL offers no evidence for its assertion that most employers comply with assurances and acknowledges that, typically, only employers' accounts are solicited on recruitment outcomes prior to certification. In the crop area we studied, we found seven of ten referred workers' accounts of their rejection or termination of employment were discrepant with the employers' or official accounts, but DOL was unaware of these discrepancies because none of these workers filed complaints. If recently established enforcement procedures can be expected to detect these potential instances of noncompliance without getting workers' accounts, DOL does not explain how.

8. We have corrected the text to reflect DOL's technical clarification.

Comments From the Department of Agriculture

Note: GAO comments supplementing those in the report text appear at the end of this appendix.

RECEIVED

JUL 29 1988

GAO/PEMD

United States Department of Agriculture | National Agricultural Statistics Service | Washington, D.C. 20250

JUL 22 '88

Ms. Eleanor Chelimsky
Director, Program Evaluation
and Methodology Division
General Accounting Office
441 G Street, N.W.
Washington, D.C. 20548

Dear Ms. Chelimsky:

The opportunity to review and respond to the General Accounting Office (GAO) draft report, "THE H-2A PROGRAM: Protections for U.S. Farmworkers," is appreciated. USDA has addressed 10 points of this report. The first six points are the National Agricultural Statistics Service's (NASS) proposed clarifications and actions concerning the Agricultural Labor Survey (ALS). The others deal with concepts underlying the H-2A program in general and were provided by other USDA staff.

1. Coverage of the farm population is unknown.

See comment 1.

The GAO report requests additional empirical evidence that the ALS sample design provides full coverage of the farm population. In theory, the multiple-frame sample design, developed by H. O. Hartley and Robert S. Cochran and widely used by statistical organizations, insures complete coverage of the target population. The list frame is composed of larger farms who typically have hired labor. Because all farms are not on the list, the area frame (which is complete) is used to provide a measure of incompleteness. Empirically, no direct evidence is available because the ALS has not been designed to specifically measure the number of farms. Questionnaire modifications are planned in FY 1989, however, to standardize the ALS procedures with other NASS surveys that are used for estimating the official farm count. The principal improvement involves identifying small farms. However, NASS survey data clearly document that small farms with less than $10,000 in sales hire a small portion of the the work force. As previously discussed with GAO staff, limited resources and survey purpose cause ALS to focus on labor statistics and not the number of farming operations.

2. Characteristics of nonrespondents are unknown.

See comment 2.

The likelihood of a nonresponse bias is diluted because ALS response rates exceed 80 percent. There is some question of the emphasis which GAO is placing on this issue since it deemed a response rate criteria of 80 percent or greater as being highly acceptable for any prevailing wage rate survey. Why a higher standard has been set for ALS is unknown. However, discussions are currently under way with NASS research staff to study the characteristics of sampled employers who are classified as nonrespondents.

3. There is no systematic assessment of enumerator effectiveness.

See comment 3.

GAO suggests that a quantitative measure of enumerator performance is needed to insure data quality. NASS has yet to implement a quantitative enumerator assessment program specifically for ALS, but other data quality control steps are operational. NASS collects

over 70 percent of ALS data by telephone with direct supervision and monitoring of data collection procedures. Research has shown that use of computer-assisted telephone interviewing (CATI) improves data quality. Data are currently collected in 15 States by CATI. A data analysis package designed for the ALS also serves as a data validation and outlier review system.

To insure consistent training of field enumerators, State Statistical Offices will be requested to send to Headquarters a copy of their training school agenda and teaching plans. All field enumerators will also complete an exam following the State training school to insure that concepts and procedures are well understood. Field supervisors will conduct additional training, if necessary. NASS will also review ALS quality control procedures to determine potential use of some direct measure of enumerator performance.

4. Precision of wage rate estimates in some regions is unacceptable.

See comment 4.

The GAO report is overly critical of a coefficient of variation that is at most 1 percent above the target for regional level wage rates. Larger sample sizes are generally needed to reduce sampling errors. Current funding restricts expansion of the sample to improve precision at the regional level or to provide the increasingly requested State level estimates. However, the sample allocation will be reviewed for possible adjustments or efficiencies.

5. The reliability of data used to convert piece rate and other rates to hourly wages is questioned.

See comment 5.

The ALS wage rates are computed as a ratio of total gross wages to hours worked regardless of method of pay. Accurate administrative records of hours worked for piece rate and salaried employees are seldom maintained by employers. Survey specifications are being developed to evaluate the accuracy of hours worked and the process which respondents normally use to answer this question.

6. Limited reporting of sampling errors is criticized.

See comment 6.

Beginning in October 1987, enhancements to the operational summary system provided sampling errors for field and livestock worker combined wage rates. These data are now available with each quarter's survey output. Variance estimates, when four quarters of survey data are aggregated, require a new summary program. A new program module will be written. This module will also serve to calculate variances for other surveys with a complex sampling design. This measure of precision will permit DOL to better evaluate USDA survey wage rates used in establishing Adverse Effect Wage Rates. Trend versus sampling variability for wage rate estimates can then be monitored as discussed in the GAO report.

7. Relevance of H-2A minimums.

See comment 7.

In the discussion of the appropriateness of USDA's ALS and DOL's prevailing wage surveys relative to wage depression due to the presence of foreign workers, GAO fails to discuss the interaction of these two minimums which may be expected to enhance wage rates over time.

The report criticizes the USDA survey of general farm wages as not being representative of the occupations where H-2A workers are normally found and that it would tend to underestimate the prevailing wage. It also faults the use of the prevailing wage as a minimum because if H-2A workers dominated an area and occupation, a circular process could ensue which might lead to wage stagnation. (The report does note that DOL takes administrative action to assure that this does not occur.) The interaction of these two minimums assures that H-2A employers must offer wage rates equal to the representative prevailing rate of workers similarly employed and requires that this rate be at or above the average for the combined field and livestock workers wage, thereby preventing wage stagnation.

The practical effect of this arrangement is, to the extent that the H-2A program is utilized, that half or more of the domestic workers in the labor supply area have the opportunity to avail themselves of higher wage rates plus noncash compensation such as free housing of assured quality, subsidized food, free transportation, and contract guarantees which include guaranteed earnings. The value of these perquisites may be equivalent to a wage enhancement of 30 to 50 percent. Over time, the movement of workers to more highly compensated jobs, coupled with the bidding for these same workers by non-H-2A employers, will propel wage rates and job perquisites upward. DOL's practice of using last year's average wage as the subsequent year's minimum also has the effect of driving the average wage upward from year to year.

8. Wage depression.

See comment 8.

The report notes the economic theory that "(T)he introduction of additional workers into an otherwise unchanged labor market will in fact lower wages and/or displace workers. Whether the additional workers will in fact lower wages or displace workers depends on the net effect of all relevant factors affecting the actual situation." (Emphasis added.) The report assumes that this will occur where H-2A workers are employed, that wages will be depressed and/or domestic workers will be displaced. This assumption ignores two very relevant factors affecting the actual situation. First, the introduction of H-2A workers necessitates the payment of enhanced compensation by employers. Second, the H-2A program confers preferential hiring rights to U.S. workers, precluding worker displacement.

9. Adverse effect.

See comment 9.

Many agricultural employers have traditionally relied upon illegal alien workers to overcome shortages in domestic labor supplies. A farmer facing certain ruin due to an inadequate labor supply would have a strong incentive to accept the uncertain risk of the Immigration Reform and Control Act of 1986 sanctions. A viable H-2A program with enhanced compensation and preferential hiring of domestic workers is clearly a preferable alternative to illegal immigration to meet labor demand. The use of illegal workers would have a greater likelihood of adverse effect upon domestic workers than would the employment of H-2A workers.

10. Worker perceptions of H-2A job offers.

See comment 10

It should be noted that since the average wage rate becomes the minimum rate for workers employed by H-2A growers, the program may require unattainable production levels of inexperienced piece rate workers or others whose output is below the average. GAO described an exemplar group in which the productivity of foreign workers was 2.4 times that of domestic workers. This indicates that foreign piece rate workers are more likely to meet minimum qualifying earnings than domestic workers. It may also mean that up to half of the domestic workers in a labor supply area have below average productivity, hence are unable to meet the minimum earnings required by the H-2A program. This leads to a perception by domestic workers that they are unacceptable to H-2A employers or that employers prefer foreign workers.

Again, thank you for the opportunity to comment on this draft report.

Sincerely,

Charles E. Caudill

CHARLES E. CAUDILL
Administrator

The following are GAO's comments on the Department of Agriculture's letter dated July 22, 1988.

GAO Comments

1. As noted in chapter 2, we agree with USDA that its multiple frame sampling constitutes a reasonable design to provide full coverage of the farm population. We welcome their plan to standardize ALS procedures with those other NASS surveys used for estimating the farm count. This action should give better comparative evidence that the ALS sample design does indeed provide full coverage.

2. We disagree with USDA's comment that we have overemphasized the issue of nonresponse bias and held their survey to a higher standard than we set elsewhere. First, we have devoted only a single paragraph to what is conventionally considered a very important issue in survey research. Second, USDA's statement that nonresponse bias is likely limited by the survey's relatively high response rate is a paraphrase of our own conclusion. Third, we describe the ALS' response rate of over 80 percent as "admirable," which is a favorable assessment congruent with the standards we apply to other surveys in our report. Nonetheless, the characteristics of nonrespondents are unknown. We are pleased that USDA is considering studies of nonrespondents to allow a better assessment of nonresponse bias.

3. USDA misinterprets our point. We did not suggest that USDA develop a quantitative measure of enumerator performance, but rather we noted that we cannot make a statement about the effectiveness of individual enumerators or their training as part of our systematic assessment because such enumerator performance measures are lacking. We agree, however, that the steps USDA proposes would provide more direct assurance of enumerator effectiveness.

4. Our conclusion about the questionable reliability of wage estimates in some regions refers to field and livestock workers. USDA's comments about target coefficients of variation are largely irrelevant to this conclusion because they refer to wage estimates for another population, that is, all hired workers. Based on the available data for quarterly wage estimates for field and livestock workers, we show that the standard errors are relatively high for some regions and could be of a magnitude to obscure real wage trends. Based on this analysis of quarterly estimates (employed due to the limited information available on the annual estimates used by DOL to set AEWRs), we tentatively concluded that the

accuracy level of annual estimates may be unacceptable. USDA's comments in no way dispute our analysis or conclusion.

We agree that larger sample sizes are generally needed to reduce sampling errors, and we recognize that expanding the survey can raise a serious funding problem. We note that USDA will review sampling allocations for possible adjustments or efficiencies.

5. We acknowledge USDA's efforts to evaluate the accuracy of their data on hours worked.

6. We note that USDA is implementing our recommendation to provide a measure of the precision of the wage estimates used by DOL to set AEWRs.

7. USDA appears to argue that the "interaction" of AEWR and prevailing wage minimums can be expected to enhance wage rates over time. While we agree that this interaction could lead to increased wages under some circumstances, the effect of the two minimums in combination can vary. For example, if the prevailing wage is a piece rate, the prevailing wage minimum has no effect on H-2A growers paying at hourly rates. In this instance, only the AEWR minimum is effective, and there is no "interaction" effect.

USDA seems to argue further that the presence of this interaction of minimums in combination with other factors will raise wage rates and total compensation. We do not know the basis for USDA's estimates for wage enhancements in the order of 30 to 50 percent, or the extent to which total compensation for H-2A employers exceeds that paid by non-H-2A employers of U.S. workers. We are not clear whether USDA believes that future or present wages are excessive or provide the necessary protection against adverse effects by preventing wage stagnation. We discuss related issues in our next comment.

8. GAO and USDA appear to agree that traditional economic theory holds that introducing additional workers will lower wages or displace workers, or both, unless some other relevant factors change the labor market. USDA seems to believe that we ignore two such relevant factors or policies—the mandated wage rates and the preferential hiring rights for U.S. workers—and simply assume that wage depression or job displacement will occur where H-2A workers are employed. This is not our conclusion, and USDA neglects to point out where in the text we make such an assumption. We agree that the two factors USDA cites are intended to prevent or compensate for job displacement and wage depression, but—

since these economic outcomes are difficult if not impossible to measure—it is not clear how successful these job protection policies are.

9. We discuss arguments for the H-2A program in chapter 1.

10. We do not fully accept USDA's explanation of domestic workers' perception of employers' preference for foreign workers. USDA says that the H-2A program may require unattainable production levels for less productive workers as a result of using an average wage for a minimum wage. While a minimum wage may create a disincentive for employers to hire less productive workers, the program does not thereby "require unattainable production levels." Indeed, the program places restrictions on the productivity minimums that H-2A growers may require for job retention. Further, we wish to underscore certain limitations in our statistic, cited by USDA, on comparative productivity between domestic and foreign workers. As we note in the report, the statistic is based on a small sample of workers at a single farm and should not be generalized.

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*U.S. G.P.O. 1988-241-164:80296

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